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Living the Stories We Create

An Educational Response to Narrative in the Digital Age

by

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Abstract

Narrative forms, play a vital role in human enrichment and development. Through them we acquire a sense not only of our environment, but of our own identity. We are drawn to describe our world and subsequently seek to emulate the image we create. The recent shift from a society dominated by print, to one where digital media prevails invites us to consider the consequences for storytelling. While theorists such as Barthes have noted the development of narrative forms in oral and print cultures, the influences of digital media on narrative are only beginning to emerge. What new stories have grown from this transition? How have these influenced contemporary expectations of storytelling? In the event of such profound change, how will education seek to address this?

In this regard it is interesting to consider the case of Shakespeare’s *Macbeth*. Conceived with the intention of entertaining, becoming subsequently the subject of literary scholarship, *Macbeth* is a work of enormous cultural significance. Written in approximately 1606 *Macbeth* has its roots in a culture of orality and yet has sustained through centuries of print dominance. Indeed as both text and performance the work itself embodies both the literary and the oral. Yet as a staple of many second level curricula (including the Irish Leaving Certificate) more and more *Macbeth* is perceived as an educational text. This research will examine *Macbeth* as a case study in seeking to explore the implications of digital media for learning, as well as its possible potential to constructively facilitate in realigning formal learning contexts to contemporary perceptions and expectations of narrative.
Chapter One: Introduction

“Narrative is present in every age, in every place, in every society; it begins with the very history of mankind and there nowhere is nor has been a people without narrative.” (Barthes and Heath, 2009, p. 79)

A constant referent for creativity and imagination, narrative pervades and moulds the cultural consciousness of humanity (Barthes and Heath, 2009). Both ancient and universal, it possesses the power to structure perceived experience, to organise memory, to segment and purpose-build the very events of life (Bruner, 2004). Through our stories we acquire a sense not only of our environment, but of our identity. Yet narratives are not fixed, they are continually informed by and subsequently respond to the cultural context. External factors such as language, place and medium are intrinsic to this process. As Marshall McLuhan noted media are not passive channels, but significant in the way they shape the stories that can be told, where they are told as well as who can tell them (qtd. in Carr 2008). In light of this, how have our forms of self-telling adapted to the recent shift from a society dominated by print to one where digital media prevails? How have the inevitable changes in perception, cognition and notions of identity influenced our engagement with narrative? How have these informed contemporary expectations of storytelling? As such what are the consequences of this change for learning?

In the wake of such transition this research will seek to address a perceived disjuncture between a culture permeated by digital media and the continued dominance of print values within education systems. This apparent dichotomy invites numerous questions with regard to the appropriateness of such a system in preparing students to become active participants in society as well as to realise the extent of their own potential. What are the implications of this for students’ engagement with their learning material and its potential meaning beyond formal learning contexts? How does it inform students’ educational experience and thus their perceptions of learning? How does this problem manifest and as such how can it be responded to? This research will thus explore the potential of digital media to rectify the disjuncture between formal learning contexts and contemporary perceptions and expectations of narrative.
Background
Narrative, Media and Society

For constructivists such as Jerome Bruner, stories represent the only real method for describing and interpreting life as it is lived (2004). Thus in a very real sense we create the world around us and subsequently seek to imitate the image we have made. This inherently creative process of exploration, comprehension and self-telling is by its nature heavily informed by cultural, linguistic, social and a variety of other contributory factors and is as such intrinsically unstable (Bruner, 2004). Considering this what are the implications of the ever increasing ubiquity of technology for storytelling? What new stories have emerged from this shift? How do such stories in turn shape our perception of ourselves and our environment?

The theorist Donna Haraway offers a compelling and prophetic insight into the relationship between the growth of technology and evolving social constructions in her essay *The Cyborg Manifesto*. Neither living nor dead and yet both, for Haraway the cyborg represents a blurring of traditional boundaries enabled by the proclivity of technology (2010). With remarkable foresight she states, “Our machines are surprisingly lively, while we ourselves are frighteningly inert” (2010, p. 456). She describes a pervasive ambiguity prevailed by the manner in which human and machine inform one another, frequently challenging the distinction of creator and created (2010). For Haraway this ambiguity represents a welcome departure from rigid yet contrived social categories. As such she encourages, “Pleasure in the confusion of boundaries” (2010, p. 455). Yet this dissolution of structures so deeply embedded in the cultural context invites further questions with regard to the relationship between media and social construction, hence the possible implications of such a shift for narrative and learning.

As has been noted by theorists including Egan, Ong and Havelock, in pre-literate cultures stories fulfilled an invaluable role in the preservation of knowledge and identity. The evanescence of sound necessitated that ideas and even entire cultures were sustained through memory. Storytelling was a vital tool in this regard, ensuring cohesion and structure for millennia (Egan, 1989a). The advent of print informed this role profoundly.

While manuscripts presented numerous challenges such as the uniqueness of the hand and utilisation of many varied abbreviations, printed books were both portable and easily deciphered, enabling rapid silent reading. Thus while prior to its invention writing chiefly functioned as an aid to oral discourse, print secured words more resolutely in the world of the visual than ever before. The implications for
social interaction and notions of personal privacy were significant, establishing a new concept of individualism (Ong, 2013).

The advent of print can therefore be understood as highly significant in regard to societal structures and interactions, as well as the role of stories therein. The influence of this shift can also be observed in the form of stories themselves. The preservation of knowledge necessitated a precise and descriptive narrative style. Such stories were heavily driven by cause and effect action, exemplified in Aristotelian poetics. However with the growth of print these characteristics were less vital. The personal and internal nature of print led to a focus on more diffuse concepts such as character, identity and atmosphere in order to convey meaning (Barthes and Heath, 2009).

It is the contention of theorists such as Haraway and Castells that the growth of the digital is resulting in a societal metamorphosis of comparable or even greater significance. Often termed ‘The Network Society’, Haraway describes this as a social discourse concerned with connections rather than individual components. Whereas previously our lives could be categorised in relation to the home, the workplace, the market etc. the growth of surveillance technology as well as the homework economy have rendered such distinctions problematic (2010). Together with this, demographic categories, for decades the basis of huge assumptions, are becoming increasingly irrelevant, with user’s actual activity being more easily tracked online (Blakley, 2010).

Yet in the face of such pervasive opportunities for connection, the growth of personalization based on algorithmic editing is leading to significant assumptions with regard to perceived needs and desires, a phenomenon that Eli Pariser terms ‘The Filter Bubble’ (2011). The potential of this process to render users vulnerable to intellectual isolation is of significant concern. Thus, conversely while offering immense possibility for connection, online experiences also possess the potential to solidify existing divisions.

As was the case with print, such profound change inevitably has implications for perception and the narrative forms that emerge as a result. The more these changes manifest in the stories that are told, the more embedded in the cultural consciousness they become. In the face of such change how will education seek to respond? Are the approaches developed in a culture of print still relevant or adequate?
Consequences for Education

The degree to which the categorical thinking associated with print culture has become embedded in education systems can be clearly perceived in C.P. Snow’s *The Two Cultures*. Written in 1959, decades before the advent of digital culture, it was Snow’s contention that the intellectual life of western society had become polarized into two groups, literary intellectuals at one pole and scientists at the other (Snow, 2012). He attributed this to a trend towards educational specialization which was only worsening with time. As a result there was no sphere in which these subjects might engage, thus the collision of two disciplines, two cultures from which a myriad of creative possibilities might emerge, has become more and more difficult.

While Snow lamented that such thought processes had become so engrained as to render their reversal highly improbable, the dilemma posed by the persistence of such a system in an age of digital connectedness has been explored in the work of Ken Robinson. For Robinson current educational systems remain rooted in the ideals of the Enlightenment and driven by the economic imperatives of the Industrial Revolution. As a result the notion that there are essentially two types of people, academic and non-academic, has become deeply entrenched in education as we know it today (‘RSA Animate’, 2010).

Robinson is highly critical of a growing reliance on standardised tests that strive towards a model of conformity. He outlines the possible implications of this by citing a longitudinal study of divergent thinking in students. The ability to see many different answers to a question, divergent thinking is a necessary competency for creativity. When tested at kindergarten level, 98% of students showed genius levels of ability in divergent thinking. The same group tested five years later displayed a significant decrease in their capacity for divergent thinking. This was again shown to have decreased in the subsequent five years. While there were many factors at play in this instance, the most significant was that the participants had become educated (‘RSA Animate’, 2010).

The inadequacy of these traditional educational approaches in equipping students to grasp the positive potential of technology for creation and connection is further emphasised by a recent EU study of children’s online activity (EU Kids Online). This research found that while children aged 9-16 spent an average of 88 minutes online each day, few had the skills required to take part in advanced creative activity including blogging, file sharing and participating in virtual environments. Instead most opted for a decidedly more passive form of engagement such as watching videos or reading websites (Livingston and Haddon, 2011). The study appears to indicate that even among this demographic, with
perhaps the most sustained and immersive exposure to digital technology there is a failure to harness the potential of the medium for creation, connection and sharing.

Despite the reluctance of education systems to embrace and respond meaningfully to the changes affected by the growth of technology, the design of digital learning applications and devices, particularly in the area of early literacy is a rapidly expanding sector. Although such products are increasingly abundant, information regarding their educational merit is frequently either vague or absent entirely. This was indicated in a survey conducted by the Joan Ganz Cooney Centre. This study also found that while many ebooks in particular, embodied a series of interactive features, it was unclear how these might aid literacy. Rather in most cases these simply served to distract children (Chiong, Ree and Takeuchi, 2012).

**Implications**

It can therefore be seen that despite its apparent apathy with regard to technology, education cannot be insulated from such change. Yet without active participation from educators it is unlikely that the positive potential of the medium will be harnessed. While digital technology has rendered it ridiculously easy to connect, create and share, doing so in a meaningful way remains incredibly difficult. As such, if educators adopt a passive approach to technology it is likely that their students will follow suit.

There thus appears to be a growing division between what is considered educational and the wider cultural experience. While expectations regarding language, form and medium continue to evolve, the reluctance of education to embody such change may result in many students failing to perceive the relationship between educational texts and wider culture. Such a disconnect calls into question not only the relevance of this educational approach, but also has major implications for self-understanding. Reflecting the evolving expectations of students with regard to narrative forms and media is crucial for realigning the positive aspects of entertainment to learning.

**Research Structure and Trajectory**

This research is thus founded in the perception that while digital media permeates contemporary society, informing the manner in which we structure and describe our lives, education systems continue to be dominated by the values of print culture. This apparent disparity raises a series of questions regarding the appropriateness of such a system in preparing students to become active participants in society as well
as to realise the extent of their own potential. What are the implications of this for students’ engagement with their learning material and its potential meaning beyond formal learning contexts? How does it inform students’ educational experience and thus their perceptions of learning? How does this problem manifest and as such how can it be responded to?

**Concepts in Context**

As the sociologist Franco Ferrarotti notes social abstractions like education can only be understood through the experiences of the people upon whose lives and work such concepts are built (1981). Therefore while grounded in the theoretical observations mentioned thus far this research seeks to explore how such a disjuncture is embodied in the activities and processes of the classroom, with particular focus on the Irish second level context. How can this be identified in daily experiences and interactions? What are the relevant contributory factors? How is this informed by media use? As such how can it be appropriately addressed? In doing so, it will consider the specific case of Shakespeare’s *Macbeth* in the Irish Leaving Certificate curriculum as a case study. This process will thus seek to address the primary research question regarding the potential of digital media to rectify the disjuncture between formal learning contexts and contemporary perceptions and expectations of narrative.

*Macbeth* is an interesting case. Conceived with the intention of entertaining and becoming subsequently the subject of literary scholarship, it is a work of enormous cultural significance. Written in approximately 1606, *Macbeth* has its roots in a pre-print, orally informed culture and yet has sustained through centuries of print dominance. Indeed as both text and performance the work itself embodies both the literary and the oral. As such *Macbeth* invites us to consider: How it has sustained thus far? What is the particular relevance of *Macbeth* for contemporary students? How can technology aid students in engaging with *Macbeth*, identifying with its narrative on a personal level and blurring their educational and recreational experience?

To this end it was necessary to ascertain a comprehensive insight into the everyday classroom experience. A detailed and authentic understanding of the experiences of both teachers and students engaged in the study of *Macbeth* in the Irish Leaving Certificate curriculum was thus sought. In striving to obtain such an insight a combination of classroom observation and interviews involving four Leaving Certificate, higher level English teachers and their students, all engaged in the study of *Macbeth* were conducted.
In keeping with the constructivist principles underlying this study the research methodology is essentially qualitative. Participants were selected purposively due to their engagement in the study of *Macbeth*. As noted these comprised four teachers and their respective fifth year, higher level English students. This group was observed by the principal researcher over a six week period as they progressed through *Macbeth*. Upon their completion of the course a series of semi-structured interviews were conducted with each of the teachers and a selection of fifteen students.

The scale and focus of this study facilitated a detailed observation of the concepts underlying this research, how these are embodied in the context of the classroom environment and their consequences for the relationships therein. This focused method was informed by the fundamental contention that all educational approaches must to a certain extent respond to the specific needs of the student group in question. While each teacher possesses an individual style, this will in turn be informed by the unique requirements of each student group. Thus within a multitude of educational environments and contexts a vast variety of relationships will exist, informing a specific, considered response.

This research therefore advocates a departure from an educational model that subscribes to the rigid propagation of a definitive, standardised approach in favour of a more considered and intuitive method. As such while a broader sample may have proved enlightening to a degree, this would inevitably have resulted in a more cursory level of discernment, together with an embedded assumption of homogeneity. As well as inadequate with regard to the depth of insight into the experiences of teachers and students necessitated by the research question, such a generalised method would run counter to the responsive approach advocated. Thus rather than striving towards an established model of conformity, this research seeks to explore a vision of what may be possible through the flexible integration of technology into education systems.

**Insights and Interventions**

From this initial stage of investigation a series of intriguing insights emerged. While offering a detailed perspective into the interactions and processes of the classroom environment, it informed the trajectory of the research significantly, prompting a more holistic consideration of educational values and aspirations, their consequences for the learning experience and what this means for the integration of technology. It was thus discerned that the creation of an education system seeking to prepare learners to wholly participate in society as well as to realise the full
potential of their own abilities would require nothing short of a complete revaluation of what it means to be knowledgeable, to be literate, to teach and to learn. While previously valued skills such as information retention and reproduction are continually undermined by technological advances and the subsequent ubiquity of information, others including problem solving, critical thinking and collaboration are becoming increasingly valued. Yet despite a general acknowledgement of this shift and a pervasive aspiration to instil and nurture such qualities, this supposed objective is largely at odds with curricular practice.

The addition of technology into the education system as a whole can only serve as a benefit in as far as the nature of its application permits. Thus the meaningful change demanded of, and aspired to by educators would not be achieved through small and steady concessions, but through an entire reimagining of educational paradigms. In the absence of such a shift it is entirely possible and indeed probable that existing failings could be perpetuated using technology. Therefore the research sought to consider conceptual and systemic changes as well as a technological response that could facilitate this process. In striving to elucidate the possible forms of interventions and learning activities reflective of such aspirations the researcher endeavoured to explore the potential of digital storytelling.

**Digital Storytelling**

Digital storytelling is a loose term that can broadly be described as the process of combining a variety of media to create a coherent narrative using technology (Banaszewksi, 2005). In this instance the process of narrative exploration is of particular relevance. The transience of contemporary culture, underlines the growing significance of qualities such as creativity. While traditional education systems are based on the presumption of permanence, stability and standardisation, contemporary students must move beyond a role as mere consumers of meaning, themselves developing the skills to create meaning (Wesch, 2014).

Yet the persistence of such traditional approaches has led to a situation whereby educational experience is perceived as distinct from the everyday lives of students or what anthropologist Michael Wesch terms the ‘Crisis of Significance’. The difficulties experienced by students in acknowledging the relevance of their learning material, renders works such as *Macbeth* at risk of confinement to the realm of the Leaving Certificate. As Bruner notes meaning does not exist in and of itself, but must be created in the mind of the learner (2004). Through narrative
engagement students are compelled to synthesise their learning material with their knowledge of themselves and of their world, revealing the significance of what is being conveyed (Banaszewksi, 2005). Similarly, in order to create these stories, students are required to research, thus creating a series of connections that extend the significance of their learning material beyond the realm of the classroom (‘Storytelling As A Pedagogical Approach For Development Education,’ n.d.).

The utilisation of digital processes is also of interest here, not only as a powerful means of creation, but in that it requires students to locate, evaluate, combine, manipulate and utilise sourced content in order to communicate their desired concept. Students are thus compelled to engage with mass media in a manner possessing the potential to develop their understanding of its nature, the techniques embodied within it, how these are used as well as their impact. In this way students may be prepared to become active participants in broader culture as opposed to mere spectators.

This research thus sought to explore the possible significance of digital storytelling to the specific questions at its core. Does digital storytelling have the potential to enhance engagement with Macbeth in the Irish Leaving Cert context and thus extend its meaning for students? If so, how might such an application manifest? Hence what potential could this realistically possess for realigning formal learning contexts to contemporary perceptions and expectations of narrative and thus the broader aspiration of an education system more attuned to the demands and values of wider culture?

As has been noted on a number of occasions thus far, the study is strongly informed by the contention that all educational approaches must respond to the specific needs of the individuals engaged within it. In light of such aspirations, this element of the project did not seek to develop a generic digital storytelling design for broad application across the Leaving Certificate Curriculum or indeed to represent a homogeneous student population, which in the view of this researcher simply does not exist. Rather this exploratory study strove to ascertain the potential (if any) digital storytelling may hold as a fluid and responsive teaching instrument.

A critical purposive sample of fifteen Irish second level students was thus engaged in order to establish the possible benefits of digital storytelling in this area and hence to determine the value of further investigation and development. This segment of the research involved the participation of the selected group in a digital storytelling workshop. During this session the participants were compelled to reinterpret a selected scene from Macbeth through the medium of digital storytelling. Students were observed throughout the session by both the principal researcher
(who also fulfilled the role of workshop facilitator) and a research assistant (in a non-participatory role). While the participant observation sought to ascertain an understanding of student engagement and interaction during the workshop itself, of equal importance was obtaining an insight into student’s thoughts and opinions regarding their experience. In order to effectively achieve this, students were invited to participate in a qualitative questionnaire.

**Significance and Potential**

This research can thus be understood to have provided a series of insights relating to theories in this area particularly in relation to their manifestation in the Irish Leaving Certificate context. Foremost among these is the foundational principle that in order to realign the learning experience with that of broader society, education must move from the objective recognition of finished learning objects, towards a system that facilitates, acknowledges and rewards processes. Among traditional educational approaches such as that embodied in the Leaving Certificate there appears a fundamental failure to adequately respond to this core issue.

While technology has a significant role to play in such reform, the best learning will not occur between student and interface, but through the relationships and interactions of students and teachers as well as among students themselves. Thus digital interventions within the proposed reformed system must depart from passive, broadcast interaction, to the facilitation and augmentation of such relationships. Although a number of technological interventions were explored in order to facilitate such an environment, digital storytelling was the primary focus in this regard. While offering opportunities to develop fundamental skills mentioned thus far, such as collaboration, problem solving and creativity, through narrative learning and engagement, digital storytelling presents specific potential in the development of media and information literacy through active participation in the digital landscape.

**Conclusion**

This research is thus founded in the perception that while digital media permeates contemporary society, informing the manner in which we structure and describe our lives, education systems continue to be dominated by the values of print culture. From this premise it sets out to explore the potential of digital media to rectify this disjuncture between formal learning contexts and contemporary perceptions and expectations of narrative. As previously noted this process is rooted in constructivist principles and will strive to build upon existing educational and media theory
developed by Bruner, Haraway and Wesch among others. In doing so it will establish the validity of further research in this area, laying the groundwork for more extensive development of the principles revealed. It will therefore inform significantly the direction of relevant and meaningful curricular reform.

Moreover, this research will illuminate potential possibilities with regard to how such reform might be implemented in actual, educational activities and processes, primarily in the form of digital storytelling. As such, it will not only excavate and analyse the primary theoretical values underlying deeply embedded concepts surrounding education, but also examine how such concepts manifest in the relationships and interactions of the classroom environment. In this way the study will provide insights with the potential to significantly inform the direction of research regarding the positive and meaningful reimagining of educational policy, systems and activities.
Chapter Two: The Review of Literature

Omnipresent and complex, the cultural, social and psychological role of narrative has invited much debate and analysis. With numerous theories having been proposed in an attempt to fathom such a concept, this review will seek to explore the role of narrative in the context of digital culture. In so doing it will focus on six key areas including the relationship between narrative and human comprehension, the implications of media for this and how these inform educational paradigms. As such the relevance of narratives conceived in different ages will be discussed, as well as how digital media itself might facilitate creative engagement with said narratives. In considering these last points Shakespeare's *Macbeth* will be explored as a case study.

**World Making and Media**

Narrative forms play a vital role in human enrichment and development. Through them we acquire a sense not only of our environment, but of our own identity. The recent shift from a society dominated by print, to one where digital media prevails invites us to consider the consequences for storytelling. How have the inevitable changes in perception, cognition and notions of identity influenced contemporary story structure? What new stories have grown from this transition? How have these influenced contemporary expectations of storytelling? Considering this, how can we effectively engage with stories conceived in a different age?

**The Narrative Mind**

Though central to human creation and comprehension, the role of the story is by no means fixed. Indeed it is both vital and inevitable that it evolve within the social, cultural and technological context (Ong, 2013). For theorists such as Jerome Bruner storytelling and narrative are intrinsic to our understanding of the world around us. Bruner sees the principle function of mind as one of creation. This constructivist view follows the idea that stories do not happen in the real world but are constructed in the mind of the individual, thus whether through the arts or sciences the mind is constantly engaged in the process of “world making” (Bruner, 2004, p. 693). In this sense life stories can be taken not as a record of events, but rather as a continuing interpretation and reinterpretation of our experience.

For Bruner narrative is the only tool available for the description of time as it is lived. Yet recounting one’s life is an interpretive exercise and thus intrinsically unstable. As a result of this instability, life stories are often heavily influenced by
cultural, interpersonal and linguistic factors. The cognitive and dialectal processes of our culture guide the self-telling of life stories. The narrative forms that emerge as a result, shape our perceptual experience, the way we organize memory, the way we segment and purpose-build the events of life. In this sense life imitates narrative as much as narrative imitates life. As such, much of the character of a culture can be drawn from the narrative models it makes available for the description of life (2004).

Yet for theorists such as Galen Strawson the search for narrative coherence is a gross hindrance to self-understanding. Strawson rejects Bruner’s notion of constructed realities. He notes that as an inherent consequence of the neuro-psychological processes of memory, every recall of past events leads to new variation. As a result telling and re-telling one’s past will lead an individual further and further from the facts. His point here is that with every narrative re-telling we move further from an accurate self-understanding (Strawson, 2004).

Strawson seeks to distinguish the self as an inner mental entity from the concept of the human being and their experiences taken as a whole. He describes certain individuals who consider their ‘self’ to have existed in the distant past and that it will exist in the further future, as ‘Diachronic’ in outlook. While Strawson acknowledges that this is the most common form of perspective, he contrasts this with an alternative ‘Episodic’ form of existence. Although aware that one has long term continuity when considered as a whole human being like those of a diachronic disposition, episodic individuals do not view the self as existing in the distant past or future. For Episodics the past bears relevance to the present not in and of itself, but merely in the way it has shaped the present. While possessing a good understanding of their own personality, they have little interest in what shaped it (2004).

Although radically opposed these states are not exclusive. While Episodics may connect to events in their past and anticipate future events, Diachronics can on occasion experience an episodic lack of connection with well remembered events in their past. Similarly Strawson contends that one can be diachronic without being narrative, for the long term sense of self need not be narrative in structure. A Diachronic may think of an event in their past without grasping it in a unified narrative form. Without feeling their lives as a narrative in this sense i.e. without large-scale coherence-seeking, they cannot be said to be truly psychologically narrative. Strawson also contends that this type of form finding is not sufficient to be considered truly narrative, rather one must also have a distinctive tendency towards storytelling. While Strawson admits some measure of form finding may be necessary for a good human life, he contends that these can exist in the absence of
narrativity. He describes this process as osmotic and unconscious, occurring in the same way that hours of practice might improve the performance of a musician, without any specific sessions necessarily being recalled (2004).

This idea of an osmotic process is in many ways akin to what Maya Deren describes as 'vertical inevitabilities'. Unlike Strawson, Deren does not consider this a natural way of being in the case of humans. Rather she equates it with the instinctual patterns of animals, a complex system which has been forfeited by humans in favour of memory. She describes an infant kitten, who through its immediate experience of reality will develop into an adult cat. In contrast the human child must learn beyond its instincts and frequently in opposition to them, through imitation, reflection, observation and experimentation, what Deren describes as the horizontal process of memory (2001).

Deren's theory is more akin to that of Bruner. She contends that human memory is not committed to the natural chronology of experience, instead these experiences can be accessed simultaneously. The beginning of an experience can be compared to its end with no need for acknowledgement of the homogenous whole. Even portions of events pertaining to widely disparate contexts and chronology can be compared and contrasted, recognizing the constancy of elements and how their functions might evolve to differing situations. As Bruner also notes the chronological whole is not fixed, rather it is a dynamic relationship of functioning parts strongly influenced by our own perception (2004).

Whether or not an intrinsic part of human comprehension, it cannot be denied that narrative has been a constant reference for human creativity and imagination (Barthes and Heath, 2009). Narrative not only offers a sense of our context and identity, but also features unceasingly and consequentially in recreation and entertainment (Gare, 2007). Through them we acquire a sense not only of our environment, but of our own identity. Yet while narrative is universal and omnipresent, narrative forms display many variations, subject to the context in which they are created and expressed. Considering this, how has the growth of digital culture manifested in storytelling? How do these stories in turn shape our understanding of ourselves and of our own environment? In seeking to address these questions we must explore not only the social and cultural consequences of our relationship with technology, but the nature of the correlation between storytelling and media in a general sense.
The Print Precedent

In her essay *The Cyborg Manifesto* Donna Haraway depicts a prophetic vision of contemporary digital culture. Both organic and artificial, alive and dead, Haraway’s cyborg allegorizes the blurring of traditional boundaries enabled by technology. The cyborg illustrates affinity stemming from “otherness, difference and specificity” (2010, p. 458), thus challenging dualisms deeply imbedded in western culture and an illusion of oneness that must isolate the ‘other’. Haraway describes the role of technology in shaping cultural identity and vice versa. Decades before large-scale adoption of digital, interactive technologies she states that, “Our machines are disturbingly lively, and we ourselves are frighteningly inert” (2010, p 456). She describes our relationship with technology as a process informed by human as well as non-human actors. Human and machine shape and inform one another making it difficult to discern creator and created. While Haraway encourages, “pleasure in this confusion of boundaries” (2010, p. 456), we must consider how the dissolution of structure so deeply imbedded in the cultural consciousness will manifest.

In a pre-literate culture, stories were invaluable for the preservation of knowledge and identity. Sound is evanescent, thus ideas and entire cultures were sustained by thinking memorable thoughts. As the most successful of memorization tools, the story provided order and stability to human societies for millennia. By embedding content into vivid events and emotive images, narratives stimulate the imagination, thus engaging the memory (Egan, 1989a). With the advent of print, the role of the story changed significantly. Prior to this invention, writing had primarily served to aid the oral discourse, recycling knowledge back to the oral world. Reading aloud was customary even when alone. As late as the twelfth century, financial accounts were checked by reading aloud or ‘auditing’. At this time even figures were understood better aurally than visually. It was with the advent of print that visual comprehension of language came to prominence. Print secured words more resolutely in the visual field than writing due to a variety of factors.

Chief among these was clarity. Manuscripts were difficult to read, not alone due to the uniqueness of the hand, but the use of many varied abbreviations. Once meaning was deciphered it was commonplace to memorize it for efficiency purposes. As a result the poetic language and mnemonic patterns used to preserve ideas in oral culture were sustained in manuscript writing, with slow, aloud reading aiding the process.

The legibility and uniformity of print dramatically changed this, enabling rapid silent reading. The implications for social interaction and the concept of personal privacy were significant. In manuscript and early print culture, reading had been an
important social experience. Typically one individual would read aloud to a group, facilitating debate and discussion around the text in question. The advent of silent reading, as well as publication of small portable books set the stage for solitary reading and a new sense of individualism (Ong, 2013).

As noted by Roland Barthes the changing role of stories has inevitably had implications for storytelling and narrative styles. The role of the oral story in the preservation of knowledge necessitated a precise, descriptive narrative, heavily driven by cause and effect action. With the growth of print such characteristics were less vital. This together with the new notions of selfhood, the personal and internal nature of print reading led to a focus on diffuse concepts in order to convey meaning, including character identity and atmosphere. Whereas in Aristotelian poetics for example, characters were entirely secondary to the action with the development of print and the novel, the character became more than a name developing his or her own psyche (Barthes and Heath, 2009). This move towards empowerment and subjective enrichment of the protagonist has also been noted by Bruner. In contrast with the myth or folktale these literary narrative forms explore the landscape of consciousness itself. This perspective narrative can also be seen to be reflected in language, with a move away from the omnipresent narration of Conrad, Proust, Hardy and Henry James towards a subjective voice (Barthes and Heath, 2009).

For Bruner it is the structure rather than the content of narrative that is relevant. He understands this under the three aspects distinguished by the Russian Formalists: fabula (theme), sjuzet (discourse) and forma (genre). The fabula is the plight of the story, what it is about, be it human jealousy, authority, obedience or ambition. The fabula is realized through the sjuzet, both in plot and in linguistic form. The plot is fundamentally structured and informed by the language of the sjuzet. The language informs what it creates not alone on a semantic level, but pragmatically and stylistically. In this regard forma is also of relevance, as the genre of a narrative commits it to a particular type of language e.g. lyric is conventionally written in the first person/ present tense, epic in third person/ past tense etc (Bruner, 2004).

**The Rise of the Digital**

It is thus Bruner's contention that the historical development in forms of self-telling, are as relevant as their ontogenesis. In sharing narrative structure, life stories within a community become interconnected through a common understanding of the nature of life. Place is thus crucial in the way it constrains and shapes the stories.
that are told or could be told. These formal structures may be laid down early in life, persisting in spite of changes in the environment. For Bruner these ways of representing and conceptualizing become so natural that they shape experience itself, moulding memory, guiding life narratives for present and future.

Yet with the development of digital technologies our conception of place has begun to evolve. In her manifesto Haraway explores the implications of this for our understanding of solitude and social interaction, describing what she calls ‘the networked society’. Haraway envisages a social discourse concerned with connections rather than essential components, reflecting the proclivity of technology. She describes how distinctions between public and private domains are becoming blurred in the technological era. Whereas previously our lives could be categorized between the work environment, the market, the home etc. the development of surveillance technologies and the facilitation of the homework economy have rendered these far less distinct. Haraway utilizes the “integrated circuit” as a metaphor to illustrate the way in which categories such as home, work, church, state etc. function as networked communication forms rather than isolated entities (2010, p. 462).

Thomas Pettitt of the University of Southern Denmark attributes the tendency towards categorization to a deeply embedded culture of literacy. For Pettitt, “the confusion of boundaries” described by Haraway represents a return to more orally informed thought processes. Pettitt understands the relationship between words and print as one of restriction and confinement. He describes words regimented on the page, with these pages then bound within a book. He even extends this line of thought to the process of print reading, citing the concept of the reader being, “lost in a book”. Pettitt contends that it was this strict documentation of language that gave rise to the now familiar concept of the finished, “work” (Metcalfe, Paradis and Pettitt, 2010).

Unlike manuscripts, which were fluid and often subject to intervention, by those who copied them, print texts allowed for duplication of an original (Metcalfe, Paradis and Pettitt, 2010). While manuscripts and oral poetry were commonly identified by their incipit or opening line (e.g. the ‘Our Father’ prayer for The Lord’s Prayer), books came with label-like titles, which attested a feeling for the contents. The completed printed work was not a diverse fragment, but had a defined beginning, middle and end. In this sense the manuscript embodied a recorded utterance in the course of a conversation, while the book is decidedly more thing-like, an object that contains information.
This sense of finality is perhaps in part due to the nature of publication. The process of creating a printed book involves many participants other than the author, including, publishers, literary agents, copy editors etc. The system of scrutiny at the developmental stage means that revision is a natural part of print publication. As a result there is a sense of finality in the print edition. Thus while the process of print publication is in a manner of speaking highly collaborative, in a general sense this collaboration comes to a definitive end at publication and does not involve the reader. The relationship between the creator and reader was as such markedly different, calling for a variety of different writing styles. Print afforded a new sense of closure that began to influence culture and social identity (Ong, 2013).

It is this notion of the completed work that has become less certain in the digital context. As with the manuscript digital texts are commonly shared or ‘re-posted’. As these texts are frequently subject to alterations and additions by those that read and share them, the roles of author and audience become less defined (Metcalfe, Paradis and Pettitt, 2010). Indeed while browsing blogs, online articles, social networking profiles etc. the reader can at any time become the author by adding comments, personal anecdotes or links (Carrington, 2009). Discussions between readers and authors can often exceed the length of an original article by many pages, expanding and developing arguments perhaps merely touched upon in the original piece. This iterative writing process is conversational and in many ways embodies a more oral style of communication, not far removed from the notion of the manuscript as a recorded utterance.

Similarly Pettitt makes a link between the finality of the print process and wider societal attitudes. He points out that just as words were being confined to the printed page, music was confined to concert halls and paintings did not scrawl arbitrarily across a wall, but were finished pieces contained within a frame. The expectation of self-contained original works and strictly defined meaning informed the categorical thought processes in other areas of life. Whereas in oral and even written culture as embodied in the manuscript, borders could be blurred and categories were often subject to overlap, in print culture this was no longer the case. While language was spatially confined as words on a page, thought processes were confined by strict categories and abstract concepts such as nations, race and belief, less fundamental in the pre-print tradition (Metcalfe, Paradis and Pettitt, 2010).

Haraway explores the social implications of this type of categorical thought. She describes the artificial way in which humans are drawn to create and organize their lives. Focusing on the feminist and socialist movements she describes the “Deepened dualisms of mind and body, animal and machine, idealism and
materialism” by which contemporary culture is defined (Haraway, 2010, p. 457). Haraway is largely critical of this approach and explains how the growth of technology is rendering it increasingly problematic (2010). She goes as far as to describe women as a socially constructed category arguing that “there is nothing about being ‘female’ that naturally binds women.” (Haraway, 2010, p. 458). This concept is much in line with the theories of Judith Butler who considers feminist theory to be severely limited by its grounding in the singular notion of women as its subject. In a manner akin to Bruner’s ideas regarding Constructivism, for Butler gender is a performance created through the actions and experience of the doer. Much like Haraway Butler seeks to free feminist discourse from a narrowly defined and inevitably exclusionary construction of gender (Butler, 2006).

These statements have taken on a new relevance with the growth of social media in particular. The dualisms and categories Haraway describes, not only inform western thought processes, but with the growth of broadcast media, have been actively utilised to shape the cultural discourse. For decades demographic categories such as sex, age and race have been the basis of huge assumptions, regarding personal belief, taste, interest etc. The growth of digital media has allowed people to wander between these demographic stereotypes to a large extent. In a recent study carried out by the Norman Lear Centre, connections created between users online, showed them to be founded on personal interest rather than demographic similarities (Blakley, 2010). This is much in line with Butler’s concept of gender, whereby “the doer is variably constructed in and through the deed” (2006, p. 148). We are therefore led to question the extent to which these demographic categories are based on meaningful connection or as Haraway suggests are socially contrived.

While offering immense possibility for connection conversely the way we consume information online has the potential to solidify existing divisions. The rapid growth in the use of algorithmic editing in social media applications, online newspapers, search engines and much more threatens to leave us intellectually isolated. Eli Pariser explores this concept in his book *Beware Online Filter Bubbles*. What Pariser describes as the filter bubble is the growing trend towards personalization online. Pariser notes that if two people google the very same word or phrase, at the very same time they can obtain vastly differing results. Even if the users are not logged in, Google can use up to 57 different signals including location, the kind of computer and browser being used, to personally tailor results. This process is not confined to Google and other search engines, but is in widespread
use in social media sites such as Facebook as well as news sites from Yahoo News to the Washington Post (Pariser, 2011).

The danger with this form of personalization as Pariser sees it, is that it brings us closer and closer to a vision of the world based on an assumption of what it is we want to see. While to a certain extent the filter bubble is informed by who you are, your genuine interests and behaviour, the problem is you cannot choose what may enter and more importantly you cannot see what is filtered out. One consequence of this has been outlined by researchers at the film and television streaming service Netflix. It was noted that while many blockbusters such as *Ironman* (Favreau, 2008) are viewed by users shortly after release, lower budget, perhaps more intellectually stimulating films reach viewers after a longer time span. What this illustrates is a ‘push and pull’ effect between our impulsive present selves and our future intellectual aspirations. While the ideal scenario allows these to coexist, the difficulty with algorithmic personalization is that it is informed by what the user clicks first. As a result more challenging, stimulating ideas are filtered out (Pariser, 2011).

For Pariser this demonstrates the failure of the internet to deliver a connected, unrestrained society. Rather the human gatekeepers of the broadcast society have simply been replaced by algorithmic ones. What is more concerning is that these algorithmic editors don't have the embedded ethics of their human counterparts. As Pariser himself notes these challenges are not new, newspapers and the broader media, particularly in the early twentieth century and prior, were not overly burdened by ethics and civic responsibility. With the realisation of the importance of information flow in a functioning democracy, a system of journalistic ethics developed. While Pariser admits this system was imperfect, in a broad sense it did allow for a balance of what we want to see and what we should. Pariser argues that with the consequences of personalization beginning to emerge, we are again facing a situation where an ethical approach needs to be embedded in our information editors, so the internet can truly deliver on its promise of a connected society (2011).

**Implications for Education**

The research of Pariser as well as that of Haraway and Pettitt underlines the cognitive and social implications of digital media. As noted by Bruner we are drawn to describe our world and subsequently seek to emulate the image we create. As such the growth of digital culture has broad implications for this process of self-understanding. While theorists such as Barthes have noted the development of narrative forms in oral and print cultures, the influences of digital media on narrative
are only beginning to emerge. Storytelling and experience can be understood as symbiotic in nature. The more such changes manifest in narrative forms, the more embedded in the cultural consciousness they become. In the event of such profound change, how will education seek to address this? Are the approaches developed in a culture of print still relevant or adequate? In seeking to explore how education might reflect this culture of connectivity it is interesting to consider the nature of the relationship between culture and education in a general sense.

Educational Structures and Boundaries
The imprint of the categorical thinking described by Pettitt and Haraway can be clearly recognized in C. P. Snow's *The Two Cultures*. Written in 1959, decades before the advent of digital culture, Snow's thesis underlines the issues surrounding the segregation of contemporary thought, nurtured through the education system. It was the belief of Snow that the intellectual life of western society had become polarized into two groups, literary intellectuals at one pole and scientists at the other. Both trained scientist and professional novelist, Snow observed a major disjuncture between the two worlds of which he found himself a part. Though broadly similar in terms of race, social background and intelligence the two worlds had all but ceased to communicate. The vast gulf of mutual incomprehension (often spilling over into hostility in the case of the young) was in Snow's view borne of a deep lack of understanding.

Each group possessed a curiously distorted view of the other. Snow uses T. S. Eliot as the archetypal literary figure. He notes the restrained, subdued tone of Eliot's language when relating his attempts to revive verse drama. Snow describes Eliot's statement, “that we can hope for little, but that he would feel content if he and his co-workers could prepare the ground for a new Kyd or Greene” (qtd. in Snow, 2012, p. 169). Snow contrasts this with comments of Rutherford as representative of the scientific approach, “This is the heroic age of science! This is the Elizabethan age!” (qtd. in Snow, 2012, p. 169). Non-scientists found scientists brash and boastful. They believed them to be shallowly optimistic while unaware of man's condition. Conversely scientists viewed intellectuals as lacking in foresight, inexplicably unconcerned with their fellow man (Snow, 2012).

Snow and his colleagues interviewed between thirty and forty thousand scientists and engineers, about 25% of the overall number working in England at the time. Snow found that theirs was a culture that contained little art, with the exception of music. Books which would have been considered staples by the majority of literary persons, novels, historical texts, plays, poetry were almost entirely absent.
Snow describes that this was not due to the disinterest of scientific persons in the psychological, moral or social life. Rather there appeared to be a mistakenly held belief that literary and traditional culture was not relevant to these beliefs. It is Snow’s contention that those belonging to literary culture were equally impoverished in terms of the sciences. For Snow this case is perhaps even more serious as there appeared to be a contention that literary culture pertained to the whole of ‘culture’.

Snow describes a gathering among persons highly educated in literary culture where the illiteracy of scientists was lamented with gusto. Yet when Snow questioned the same group on their knowledge of the Second Law of Thermodynamics, a fundamental scientific principle, the response was both negative and cold. Their ignorance appeared to have its roots not in their nature, but in training. Where the scientists would often confess to having, “tried a bit of Dickens” (Snow, 2012, p. 172), in the case of the literary group Snow describes; “As with the tone deaf, they don't know what they miss.” (Snow, 2012, p. 173).

In Snow’s view there was no place for these cultures to meet. He attributed this to a trend towards educational specialization which was only worsening with time. Snow suggested that the gulf between scientists and non-scientists had become even wider among the young than it was thirty years prior to his study. Almost 60 years ago he states that there is only one solution: the rethinking of our education system. Yet while Snow contends that there is a general consensus among educators that the school system is too specialized, he suggested that specialization may have become so ingrained that it cannot be reversed. As a result the collision of two subjects, two disciplines, two cultures from which a multitude of creative chances might emerge has become more and more difficult. The interaction from which a variety of breakthroughs have historically emerged has become stagnant due to the fact that these two worlds simply cannot communicate.

The research of Ken Robinson is much aligned with the contentions of Snow and demonstrates the degree to which his assertions have become all the more acute in the contemporary era. Robinson has noted that across the world education is undergoing a process of reform. The principle drivers behind this are twofold. The global economic crisis\(^1\) has demonstrated the difficulty in predicting economic structure in even the shortest time frame. How then can we educate children to take their place in the economy? Secondly how can we sustain a sense of cultural identity in our children, maintain the cultural genes of our community while at the same time participating in globalisation? While societies strive to prepare their

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\(^1\) This refers to the Global Financial Crisis of 2007/08
children for this evolving world, the systems through which they seek to achieve this are that of different age. Whereas in the past students could be incentivised by the idea that participating in education and obtaining a degree would result in employment, this is no longer guaranteed. As a result this system leaves behind many children who simply fail to see its relevance (‘RSA Animate’, 2010).

The current educational system embodies the ideals of the Enlightenment and was driven by the economic imperatives of the Industrial Revolution. Prior to this public education that was open to all and free at the point of delivery did not exist. This was an innovative concept that generated much criticism due to a widespread belief that it was impossible for working-class children to benefit from an education. The system that emerged was thus built upon assumptions regarding social structure and capacity. The Enlightenment view of intelligence that it proposed to confer understood that real intelligence came from an aptitude for deductive reasoning, originally stemming from a knowledge of the classics and what we have grown to understand as academic ability. As a result of this the idea that there are essentially two types of people academic and non-academic has become deeply engrained in education as we know it today (‘RSA Animate’, 2010).

Robinson notes that as a result of being judged against this model many brilliant people have come to think of themselves as inadequate. While this approach has indeed been highly beneficial for some, for many it has proved deficient and others have suffered greatly as a result of it. Robinson notes that children today are living in the most intensely stimulating age in the history of the earth. They are constantly besieged by information, their attention pulled between multiple platforms. Robinson contends that many children are being penalised for this and points to the rise in reported instances of Attention Deficit Hyperactive Disorder (ADHD) in the United States in particular. While Robinson does not deny the existence of ADHD, he notes that it is still a matter of debate. He describes the alarmingly cursory manor with which children are prescribed potent medication such as Adderall and Ritalin, with prescription rates appearing to depend heavily on medical fashion in specific locations, increasing dramatically as one moves from the western to the eastern United States. Robinson also draws a correlation between the increase in instances of ADHD and growth of standardised testing, which essentially strives for a model of conformity (‘RSA Animate’, 2010).

Robinson stresses the adverse consequences of this in a general sense, but identifies the arts as its principle casualty. Addressing the aesthetic experience, the arts draw us to resonate with the excitement of what is being engaged with, in that moment to be fully alive. Conversely the anaesthetic effect of these drugs equates
to the shutting off of the senses. It is thus the view of Robinson that the process proposed seeks to get children through education by anaesthetising them, where the goal should be the opposite, waking them up to the ability they already possess. He cites a longitudinal study of divergent thinking in students. The ability to see many different answers to a question, divergent thinking is an essential capacity for creativity. When tested at kindergarten level 98% of the students showed genius levels of ability in divergent thinking. The same group tested five years later displayed a significant decrease in divergent thinking ability. This was again shown to have decreased in the subsequent five years. Much happened to these children in the intervening years, but most significant of all was that they had become educated. They had learned that a question had one correct answer and that this was found at the back of their text book. They had learned not to copy (or collaborate) (’RSA Animate’, 2010).

Not only is the current education system modelled on the interests of industrialisation, but also in its image. Schools are organised along factory lines, ringing bells, separate facilities, isolated specialized subjects. Students themselves are put through in batches dependent upon age. For Robinson this is a somewhat arbitrary grouping when many students of varying ages have different abilities in different disciplines, work better at different times of the day, in larger or smaller groups or by themselves. Robinson advocates a move away from this production line mentality towards a new paradigm of education. In his view we need to radically reassess our understanding of human capacity. Traditional conceptions of academic and non-academic, abstract, vocational and theoretical should be recognised for what they are, fiction (’RSA Animate’, 2010).

Kansas University anthropologist Michael Wesch also calls into question the relevance of traditional educational approaches. Wesch investigates the implications of the increasingly atypical experience that is the classroom or lecture theatre. The traditional classroom is structurally hierarchical. Knowledge is conveyed with authority by a teacher and absorbed passively by students. Such an environment makes the assumption that information is rare and hard to find, an assumption increasingly out of step with real world experiences, whereby information is not only accessible, but instantly so (Wesch, 2014).

Wesch contends that the otherness of the educational experience, has led to a “crisis of significance”, whereby students fail to see the relevance of their educational texts and are thus disinclined to engage with them (Wesch, 2014). In a survey carried out by Wesch of 131 students, the majority admitted to reading less than half of their assigned texts, of these texts only 26 percent were deemed by
students to be relevant to their own lives. Wesch’s findings are interesting in that he identifies the issue of significance even before considering the content of the text (Wesch, 2008). Even before students have begun to contend with their educational texts, these are understood as something outside contemporary culture. They are thus deemed insignificant.

Yet the challenges are not wholly contextual. In The Gutenberg Elegies: the Fate of Reading in an Electronic Age Sven Birkerts discusses what he considers to be the implications of inter-textual knowledge acquisition in the digital world. Birkerts describes the process of gleaning information from a variety of disparate sources, searching texts for relevant phrases or sections and bypassing the remainder as “laterally associative rather than vertically cumulative” (Birkerts, 2006, p. 494). While the print reader descends the page adding to their knowledge, in a discernible, meaningful framework, the connection between a variety of digital fragments can be as tenuous as a single word (Birkerts, 2006). The concern is that when our understanding is shaped by a variety of diverse information chunks, devoid of social, cultural or historical context, we become isolated from our own position in this schema and therefore the significance of knowledge development.

Birkerts describes the consequences of this new reading form, while recounting his experience of teaching the Henry James's story Brooksmith, to his undergraduate students. The students were utterly put off by the density of the prose and what they perceived as archaic diction. Birkert found them unable to grasp the significance of choices made by characters within the societal context of the story, or their subtle moral distinctions. It appears there is a danger that our capacity to infer text, to create the resonant psychological links, that form when we read deeply and without disturbance, remain barren (Birkerts, 2006).

The Challenge of Creativity

One of the most significant and abiding questions facing educational systems is how to prepare students to function more effectively in society, as well as to realise the full potential of their individual abilities. While previously valued skills such as information retention and reproduction are continually undermined by technological advances and the subsequent ubiquity of information, others including problem solving, critical thinking and collaboration are becoming increasingly valued. Yet the nature of traditional education systems perhaps reveal certain misconceptions with regard to the nature of creativity. While notions persist of creativity as an effortless process, the reserve of a gifted few and a mystery to the masses, this is simply a fallacy (Robinson, 2011). In seeking to address the limited role of creative
engagement in education it is likely that this romanticised view of creativity, will need to be re-examined and perceptions demystified if such skills are to find a place in the contemporary school systems.

Creativity is not merely about ideas, but about making judgements in relation to ideas. It is an iterative process whereby concepts are formulated, these are then assessed, usually culminating in a change in direction based on this assessment. Such a process requires a great deal of bravery, a willingness to experiment, to take chances and most importantly to be wrong (Robinson, 2011).

Knowledge in an Age of Transience

The pace of change in the digital age underlines the futility of such a system. Fifty years ago the information we consumed fitted relatively neatly into the schema of everyday life (Ohler, 2008). Neil Postman describes the nature of this broadcast era whereby the conversations were created by the few, for the consumption of the masses, yet today a singular outlook is no longer prevalent and the homogeneity propagated by traditional education systems is neither appropriate nor sufficient (Postman, 2006). This lack of consistency necessitates a willingness to let go of the obsolete and embrace new possibilities, a need for lifelong learning. Similarly the conflictual nature of information in contemporary society requires that students become critical thinkers and problem solvers. Michael Wesch describes this as a process of moving students from being knowledgeable to ‘knowledge-able’ or from being mere consumers of information to being able to find, sort analyse and even create meaning (Wesch, 2014).

Wesch’s theories stem from the assumption that the concept of being knowledgeable changes in line with the media landscape. This is rooted in the idea that media are not passive tools of communication, they are filters that shape what can be said, who can say it, who can hear it, how it can be said. In this way they mediate the types of relationship we can have with one another (Wesch, 2014). In order to function effectively in our media saturated world students must begin to understand the nature and recognise the persuasive effects of media. Together with this the pace of change raises a number of questions with regard to the types of literacies education systems should support. While students must seek to be effective writers in order to communicate, so too must they strive to become effective media users in order to convey stories as well as comprehend the true nature of stories being told to them (Ohler, 2008). Therefore while the proliferation of information in the digital age alters our understanding of what it is to be
knowledgeable, it also underlines the futility of a system that equates knowledge with cumulative information.

**Technological Literacy – The Myth of the Digital Native**

Yet while it appears that technology has begun to inform expectations regarding language, form and medium, a coherent educational response to this has yet to emerge. Interestingly despite its ubiquity within contemporary culture, it seems the positive potential of digital media for creation, connection and sharing have yet to be grasped by the majority of children and young adults. A recent EU study of children’s online activity (EU Kids online) found that while children aged 9-16 spend an average of 88 minutes online each day, only a quarter of these have the skills to partake in advanced creative activity, including file sharing, blogging and participating in virtual environments. Instead most children opt for a more passive level of engagement including reading websites, watching videos and solitary game play (Livingston and Haddon, 2011). What this study seems to suggest is that even in this demographic, with the most sustained and immersive exposure to digital technologies, there is a somewhat feeble grasp of the potential of the medium for creation, connection and sharing. Instead this broadly passive approach suggests an attempt to understand digital media in terms of traditional broadcast media.

This can hardly be surprising when we consider the degree to which education appears to have remained insulated to this change. The results of a recent study carried out by the Department of Education, Trinity College Dublin indicates that this is a trend that is set to continue. The study of students training to become primary school teachers sought to explore the concept that with rising usage of technology in the personal lives of trainee teachers, these students would be more likely to incorporate technology into their teaching practice. The principle question being posed: are they willing or able to be the leaders of change upon qualification? (FitzGibbon et al., 2011).

The study sought to explore trends in social media usage as well as the use of immersive virtual environments among students. What were the potential educational benefits of these technologies and could student teachers identify and appreciate these? The study also sought to compare student teachers’ usage of technology with that of other students. The study was particularly interested in the use of blogging, outlining the work of Williams and Jacobs which explores the potential of blogging to become a transformative technology in teaching (2013). In this regard it also noted Johns’ concept of the reflective practitioner, outlining the
possible role of blogging in allowing students to fill the role of reflective practitioner as they blog. In this way it was felt that blogging had the potential to change the academic discourse, advocating a more student centred approach (FitzGibbon et al., 2011).

However the study found that only a small minority of students surveyed (five percent) kept a blog. While one in three students were frequent users, social networking a minimum of once every three days (with students in this group generally networking much more than this, multiple times in a single day), the principle use was one of communication. Comments, messages and photograph sharing accounted for 95% of usage with profile display, wall messages and quizzes reported as other less common reasons for usage. No simple relationship was discerned between student’s use of social networks and how they thought these might be used in teaching. Indeed social networking was not deemed as having any value for education, with even the most frequent users seeing it primarily as a communication device. The student teachers’ results were compared with that of computer science and economics students, both of which displayed higher proficiency and proclivity with regard to social networking.

The research also sought to explore attitudes and usage of immersive multimedia environments focusing in particular on Second Life. The researchers noted that when used in a classroom setting Second Life had engaged students, who paid attention and were less disruptive upon its introduction. Students began to build on their concept of 21st century skills, how to use the environment, how to express themselves within it, as well as acknowledging the value of enquiry learning. While the use of an avatar as in Second Life is controversial, raising many safety concerns, the researchers cite the work of Mullen et al in this regard, which states the necessity for trainee teachers to develop an understanding of social construction in a school’s assumptions of success in order to gain an insight into the effects of racism, poverty, heteronormativity and other pathologies of student development. Researchers suggested that such an understanding could be achieved through virtual reality (FitzGibbon et al., 2011).

When questioned with regard to the educational implications of Second Life, the student teachers saw no benefits, but identified many negatives. They felt that it was dangerous for children to have an alter ego, that children's time would be better spent playing with one another rather than wasted on Second Life. These results were contrasted with a group of computer science students. Despite much coverage in the media with regard to Second Life at the time of the study, six students in the group of 27 had never heard of it. Yet students in this group outlined a number of
potential educational uses including locating persons with which to practice a foreign language, exploring the relationship between work and income as well as teaching social skills. Together with these the computer science students identified a number of possible dangers presented by Second Life including its vulnerability to abuse and misinformation as well as problems maintaining concentration in an environment so full of distractions.

The teaching students displayed an increase in the use of photo-sharing, which researchers surmised could be a way to begin to get a sense of the creative and spontaneous potential of technology within education. However these students exhibited a much lower rate of video sharing when compared to the computer science students. With their use of technology reflecting social and interpersonal skills rather than problem solving or creativity, student teachers were found to be unprepared to participate in any change to the educational system. In general the study found student teachers to be on the wrong side of the digital divide when compared with their fellow students. Indeed in a finding that appears to demonstrate the endurance of Snow's assertions, students choosing to enter education were even less technologically aware than others entering the university (FitzGibbon et al., 2011).

Despite the reluctance of many educators to engage with technology, a number of digital devices specifically designed for educational application have begun to emerge particularly in the area of early literacy. A study of the top-selling digital products including apps, software, websites, games and other digital content conducted by the Joan Ganz Cooney Center found that those purporting to aid children with literacy skills made up a sizable portion of the market. More than 80% of top selling apps in the education section of the Itunes store were aimed at children; of these 72 percent targeted preschool aged children (Chiong et al, 2014).

The majority of these focused on very basic literacy skills such as letters, phonics and word recognition; as such they would not have been useful for children beginning to develop grammar and storytelling. Despite their evident popularity the study found that few of these gave any information with regard to their effectiveness or any research that might support their claims. The study noted that although a large variety of learning-to-read apps were emerging at a rapid pace, information as to whether the developers had a background in early literacy or whether the app had been evaluated in any way, was either scant or non-existent. As one consulting firm for development in children's media put it to the researchers; “There is so much noise in the app space and much of it is really hit or miss” (Scott Traylor qtd. in Chiong et al, 2014, p. 10). While the study acknowledged that a number of groups
including Common Sense Media, Kindertown, Yogi Play, Children’s Technology Review, Parents’ Choice and Applolocious lists created by educators had begun to assess these products, it found serious requirements for growth in this regard, noting that attempts to curate the educational category of the App Store underlined the need for input from early childhood and literacy experts (Chiong et al., 2014).

The study also noted that while many ebooks boast a number of features; 95% having optional narration, 65% with embedded games and 60% with sounds: it was unclear how these might aid literacy. Indeed another study carried out by the Joan Gantz Cooney Center comparing the effects of ebooks to that of print, found that many enhanced ebook features served only to distract children from the story. Children that read the enhanced ebook version were shown to remember less narrative details than those that read the print version. As well as this the enhanced ebook was found to be less successful than the print or basic ebook in supporting the benefits of co-reading. When adults prompt children with questions relating to the text, label objects and encourage them to discuss aspects of the book in terms of their own experience and curiosities, this elicits increased verbalization on the part of the child. This was less likely to occur in the case of the enhanced ebook as it tended to distract both the children and adults, as well as stimulating more non-content related interaction (Chiong, Ree and Takeuchi, 2012).

This led researchers to conclude that developers should exercise caution when adding features to ebooks, particularly where these do not directly pertain to the story. The results appear to underline the findings of the previous study that increased input from learning and literacy experts as well as more extensive evaluation is required. Yet researchers were keen to stress that the study was particularly concerned with book-reading with a focus on learning and comprehension. While teachers and parents should avoid enhanced ebooks when prioritizing literacy building experiences, enhanced ebooks should still be valued for their ability to engage children and prompt physical interaction (Chiong, Ree and Takeuchi, 2012).

While the findings of Robinson and Wesch indicate a need for education to engage with digital culture, the assertions of Birkenants together with the work of the Joan Gantz Cooney Center reflect the inevitability that developments will impose themselves on education in some form. Problems arise through the fact that without active collaboration from educators it is unlikely that the positive aspects of digital media will be harnessed. While digital technology has rendered it ridiculously easy to connect, create and share, doing so in a meaningful way remains ridiculously difficult (Wesch, 2014). If teachers adopt a passive approach to technology it is
likely that students will follow suit. The nature of the relationship between education and wider culture means that this passive approach within education could have major implications for attitudes to digital media in a general sense, as indicated by EU Kids Online. As digital culture continues to grow with or without the principles of educational enrichment, it is modelled in the image of commercial consumerism and entertainment. Thus solidifying the issues outline by Pariser and a culture based on first preferences.

There thus appears to be a growing division between what is considered educational and the broader culture experience. As both Wesch and Robinson note, while expectations regarding language, form and medium continue to evolve the reluctance of education to embody such change leads many students to fail to see the relationship between educational texts and wider culture. Such a disjuncture calls into question not only the relevance of this educational approach, but also has major implications for self-understanding. If students are unengaged by the educational process as a whole how can they interact with narratives of the past, thus comprehending their place in cultural and historical development? Reflecting the evolving requirements of students with regard to technology and media is crucial for realigning formal learning contexts to contemporary perceptions and expectations of narrative.

In this regard it is interesting to consider the case of Shakespeare's Macbeth. Conceived with the intention of entertaining and becoming subsequently the subject of literary scholarship, Macbeth is a work of enormous cultural significance. Written in approximately 1606 Macbeth has its roots in a culture of orality and yet has sustained through centuries of print dominance. Indeed as both text and performance the work itself embodies both the literary and the oral. Yet as a staple of many second level curricula (including the Irish Leaving Certificate) more and more Macbeth is perceived as an educational text. As such Macbeth is an interesting case for exploring the relationship between digital culture and education, inviting us to consider: How it has sustained thus far? What is the particular relevance of Macbeth for contemporary students? How can technology aid students in engaging with Macbeth, identifying with its narrative on a personal level and blurring their educational and recreational experience?

What is Macbeth? - Preservation, adaptation, interpretation and Macbeth’s cultural life

The Transitional Moment
Macbeth’s conflict is an imprint of its time. In the wake of the Reformation people began to think of spirituality in personal rather than institutional terms. There was a growing focus on the conscience as the primary realm in which God worked and the responsibility of the individual to the almighty. This period also saw the Dissolution of the Monasteries.\(^2\) The appropriation of church property by both the crown and lay individuals had the effect of instilling a mentality of expediency in the public consciousness, as well as a tendency toward moral flexibility. The Dissolutions also resulted in a redistribution of wealth within the established social structure. As a consequence of this many found themselves in possession of assets that did not correspond to their role in the strict societal hierarchy (Jones, 2002).

This hierarchy was shaken even further by ascent of a new Scottish king to the English throne. The successor of the much loved queen Elizabeth I, King James VI was a controversial figure whose ascendancy brought widespread fear and uncertainty. Although raised protestant, James was the son of a catholic and a traitor. An admired intellectual, James was one of the most published authors of his day. His famed chastity and *The King James Bible*, a translation of the scriptures cleansed of papal terminology won him favour among the puritan movement. Yet he was notoriously decadent and his desire for union was unpopular in the extreme.\(^3\) A series of plots and counter-plots, for and against the new king began to emerge, culminating in the Gunpowder Plot.\(^4\)

James suspected the Gunpowder Plot to be part of a wider conspiracy. The subsequent investigation led to the arrest of Father Henry Garnet and the discovery of *The Doctrine of Equivocation*. *The Doctrine* was a guide penned by Garnet that advised Catholics on deceiving authorities without actually committing the sin of lying. Garnet was tried for his involvement in the Gunpowder Plot as well as attempting to “alter and subvert the government of the kingdom and the true worship of God established in England”. Equivocation burned at the heart of the case and the concept was firmly embedded in the national psyche (*The King and the Playwright*, 2012).

Under Elizabeth’s rule England faced simpler challenges. Wars with Spain had solidified national identity and strengthened the social order. In contrast the hidden dangers of equivocation threatened to rot society from within. As well as the

\(^2\) A period between 1536 and 1541 during which Henry VIII disbanded the catholic monasteries, priories, convents and friaries of England, Ireland and Wales, appropriating their income

\(^3\) James VI ruled both Scotland and England in personal union

\(^4\) The Gunpowder Plot of 1606 was an assassination attempt against King James I by a group of provincial English Catholics
changing religious landscape, economic and demographic changes had a profound influence on the social outlook. The Enclosure Acts allowed for the division of large sections of land farmed by all, into smaller fields for grazing sheep. Enclosure had the effect of removing people from the land. As the sheep required minimal tending, not only did tenants lose their own means of cultivation, but they were no longer needed to maintain the estate of the landlord. This led to widespread unrest and a series of violent riots most notably in 1607 (*The King and the Playwright*, 2012).

Added to this the opening of a variety of new trade paths during The Crusades had contributed to the growth of towns and cities. England was moving from a land to a money-based economy. As a result of this the feudal system upon which community structures were founded and understood began to break down. Individuals began to re-evaluate their role in relation to the community. They began to question the idea that things were ordered as they should be. Whereas previously the concepts of society and communal duty were one and the same they were now beginning to diverge (Jones, 2002).

The growth of urbanism had also resulted for many in a level of isolation never before experienced. A more internalized focus began to emerge, a rising interest in the individual. Drama and literature as evidenced by *Macbeth* began to display a more sophisticated insight into the consciousness of the individual. Macbeth’s struggle, his desire to escape, even his soliloquies would not have made sense in the context of the God centred thematic of the medieval morality play (Bruster, 1992).

The havoc that ensues as a result of Macbeth’s attempts to shake off his predetermined role may be construed both as a judgment on the direction of society and an expression of fear with regard to its state of transition. However while the barbarity of Macbeth’s actions should draw the audience to view him as an isolated mad man, the basic humanity of his struggle means that the viewer can relate to him far more easily than the moral, but flat characters in the play such as Duncan and Malcolm (O’Toole, 2002). When we meet Macbeth he is presented as a martial man. His unquestioning loyalty to his king moves him to acts of savagery without hesitation. Yet conversely the murder of Duncan reveals a sensitive human being (Mills and Wise, 2006). While the obligations of his societal role allow him to murder indiscriminately, but mindlessly, when confronted with murder as considered, personal choice he reacts with horror.

Macbeth’s conflict is thus as much with himself as with social patterns. His character can be understood as the interface between the inner, psychological struggle with the region of the personality that does not succumb to societal
influences and the sociological struggle between an overbearing culture of prescription and one of individual freedom. Macbeth is a child of his time. His character can be understood from a Post-Freudian perspective as the dynamic adaptation of personality to cultural milieu. The changes in social conditions in turn produce changes in his character (Gabriel, 1983).

The play offers an equally revealing and relevant insight into cultural psychology in the form of the Witches. Depicting the Witches presents many challenges for a director, are they real or imagined, physical or spiritual, male or female? The text's reference to them as ‘The Weird Sisters' informs the common interpretation of them as female, yet we can never be sure. Their appearance creates confusion in this regard even among the other characters, Banquo stating, “You should be women/ And yet your beards forbid me to interpret/ That you are so” (Shakespeare, Macbeth, act 1, scene 3, lines 46-47). Deciphering the sex of the witches is complicated further when we consider that in Shakespeare’s time, due to the prohibition of women on the stage, they would have been played either by men or boys.

The difficulty in defining the appearance of the witches is a symptom of their role in the play. They are there to confuse both the audience and Macbeth. Indeed they exemplify the loss of definition at the heart of the play. Themselves defying classification, they refuse to allow basic contrary categories such as male and female, truth and lies, losing and winning to remain opposite. Even their input in the action of the play is ambiguous. In the play’s opening lines they state, “Fair is foul and foul is fair” (Shakespeare, Macbeth, act 1, scene 1, line 12-13), preparing us for the confusion that will imbue the events to follow. On Macbeth’s entry he echoes this statement almost exactly prompting the audience to question to what degree are the witches controlling his actions? Alternatively are they in fact an extension of Macbeth and Banquo, a psychological manifestation of their shared desire (O’Toole, 2002)?

The efforts of the witches to blur definition, speaks to the issue of equivocation as well as the disintegration of societal structures earlier discussed. Conversely, the ambiguity of the Witches also indicates the fluidity of certain categories inherent in the orality of the time. Although far from a purely oral society, the dominance of oral culture in Shakespeare’s time meant the audience would have had very different conceptions of categories and definitions than that of the contemporary spectator. While modern viewers would have categorical, predefined concepts of certain objects, people or actions, this kind of conceptual thinking is very much informed by a late stage of literacy, that did not exist in Shakespeare’s
time. At that point the meaning of words was derived from their everyday use, informed not only by words, but all aspects of their environment including gestures, vocal inflections and facial expressions. Meanings were thus formed in the present and while past meanings may have shaped present meanings in a variety of ways, this was not necessarily recognized (Ong, 2013). The experience of the Witches, their appearance and actions does not suggest they are female, nor does it suggest they are male. As the Shakespearean viewer will not think of the Witches in abstract categorical terms, but in terms of their experience of them at that moment, it was thus easier for them to accept the Witches as neither man nor woman, but simply something other.

As such Macbeth is a portrait of a culture in transition both structurally and psychologically. While the ambiguity of the Witches recalls the breakdown of boundaries discussed by Haraway earlier in the chapter, Macbeth's personal psychological struggle speaks to Barthes' description of the internal focus that flourished with the rise of print. Thus while saturated in the context of its day Macbeth contemplates many of the questions posed by the rise of digital culture, such as the relationship between the individual and society. The play's enduring appeal is emblematic of our desire to comprehend societal issues on a human scale. Macbeth's character presents a way of exploring complex societal issues, perceived as alien and cold in their vastness, through a comprehensible, engaging personal struggle. As such storytellers have frequently looked to Macbeth to contemplate and reflect the social context in which it is told, mining its vast depths for answers.

The Mirror Macbeth
An interesting example of this is Li Jianwu's 1945 interpretation of Macbeth staged in Shanghai. The production was stimulated by the Japanese occupation whereby a protest stoppage by indigenous playwrights combined with a ban on US films resulted in a thirst for new adaptations, particularly those with a patriotic bent. This version of the play is related to an episode of history, with the protagonist being portrayed by the Chinese historical figure Wang Deming. Together with the context, several themes in the play are adapted to Chinese culture. The Macbeth character Wang Deming is presented as the adopted son of Duncan. The significance of this is the absolute obligation of the individual to both family and state under the Confucian ideology. Thus the murder of Duncan is a double transgression.

The production replaces the characters of MacDuff and his family with Li Zhen and his son. Li Zhen is a Confucian scholar and the only noble to express
loyalty to Macbeth. However in secret Li Zhen is seeking to restore the legitimate heir, a child who never appears on stage. In an archetype of classical Chinese theatre, Li Zhen is confronted by Macbeth’s supporters in an additional fifth act and forced to hand over his own son, to protect the heir to the throne. The focus of the play is a traditional act of heroism of a father sacrificing his son for his country, rather than a terrible figure torn down by guilt (Li, 2008).

This adaptation represents an entirely new reading of the play. Li Jianwu’s production not only revealed much of Chinese tradition and ideology to the foreign viewer, but also drew the local audience to examine their own political environment. While Macbeth’s ability to transcend the temporal and cultural environ is testament to its inherent and universal humanity, often it is the contextual distance offered by the play’s story that appeals. Through exploration and amplification of the play’s vast depths storytellers may examine raw contemporary issues, in a context that is safely removed, allowing space for contemplation.

In her essay *Remind Me: How Many Children Had Lady Macbeth?* Carol Chillington Rutter explores the depiction of the child in British productions of the 1980s and 90s. Rutter describes a complex backdrop of social and moral reflection with regard to societal attitudes to children. New legislation was introduced redefining the concept of childhood, recognizing the value of children in unprecedented ways. The term bastard was removed from law and caning banned from schools. Yet during the same period declarations by the Thatcher government that there were ‘individual men and women’, ‘there [were] families’, but ‘no such thing as society,’ decimated any notion of social responsibility with regard to children. Government policies exerted severe strain on families, putting vulnerable children at risk. This combined with four major inquiries into child abuse and a series of high profile individual cases, provoked examination of the British family. Further in 1993 images of Jon Venables and Robert Thompson leading two year-old James Bolger by the hand through a Liverpool shopping centre, led to questions regarding the innocence of the child (Rutter, 2008).

Rutter focuses on two Macbeth productions Adrian Noble’s 1986 stage version and Penny Woolcock’s 1997 television film *Macbeth on the Estate*. She describes Noble’s Macbeth as taking “a long look at desecrated childhood, perverse parenting, assembling fragments from a culture at large into a form that, resonating against the Shakespeare text, interrogated the present” (Rutter, 2008, p. 42).

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5 James Bolger was abducted from New Strand Shopping Centre in Merseyside, England and murdered by ten year olds Jon Venables and Robert Thompson
production poster featured a spitting image style representation of Sinead Cusack’s Lady Macbeth and Macbeth played by Jonathan Pryce, holding a Frankenstein baby. The three appear to blasphemously evoke religious portraits, a vision of the unholy family, while at the same time anticipating the Witch’s triad. The child is fake, yet abhorrently real, a freakish, fetishized doll, a disturbed mother’s surrogate for a lost infant.

The production is steeped in the image of the child. Cusack’s Lady Macbeth is centred on the loss of a child. For her the loss of a child represents the loss of hope and innocence. Perversely the death of the child is a motivation for child killing. Pryce too drew on this concept in his portrayal of Macbeth. Throughout production he was influenced by childhood memories of the Moors Murders. He envisaged Myra Hindley as a ‘Fiendlike Queen’, who achieved gratification ‘through power over children’.

The opening scene depicts the bloodied corpse of a child soldier rising from death, only to be led away by the witches. Macbeth is frequently shown in the company of children. Yet the interaction is uncomfortable and unsettling; it appears to taint the sacred realm of childhood play. In act four scene one, apparitions take the form of children. They taunt Macbeth appearing to control him like a ventriloquist's dummy, only to appear in the next scene as the children of MacDuff. This challenges the notion of innocence, imbuing them with some sort of malevolence (Rutter, 2008).

The impression of uncertainty with regard to childhood innocence is equally prevalent in Penny Woolcock’s television film *Macbeth on the Estate*. Set on a Birmingham council estate *Macbeth on the Estate* demonstrates the raw violence and thuggery of *Macbeth*. The estate itself is an ugly brutalized dystopia, presided over by an obscene father figure in the form of gang boss Duncan. A parody of the Thatcherite entrepreneur he runs a series of protection rackets, drugs and prostitution on the estate. His subordinates are strangely childlike, subjects of a nanny state, they depend upon him for instruction as well as ‘estate handouts’. Their convalescence extends to an infantile faith in the hand of fate, materialized in the images of the National Lottery and Bingo that appear again and again.

As with Cusack’s depiction, here Lady Macbeth as portrayed by Susan Vidler is consumed by the loss of a child. For this Lady Macbeth the loss of a child has killed any tenderness or motherly instinct, immunizing her to violence. Killing

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6 The Moors murders were perpetrated by Ian Brady and Myra Hindley in what is now Greater Manchester, England. Their victims were five children aged between 10 and 17. The murders occurred between July 1963 and October 1965.
Duncan will recuperate her loss, restoring not only her lost son, but the son lost by Duncan’s rejection of Macbeth. Children are a constant presence. They observe the adults, mimicking their behaviour. Unnaturally old and strangely knowing, they provide an interesting comparison with the infantilized male gang members. These children are not portrayed as innocents initiated into or corrupted by a culture of violence, they are of the estate. In a world seemingly dominated by masculinity and ritualized violence there is a sense that in reality it is the children that are guiding the sequence of events. The concept of childhood is thus bizarrely inverted (Rutter, 2008).

Woolcock’s Weird Sisters are portrayed by children, yet unlike the other children of the estate these are strangely disconnected from the adult world. Like the apparitions and children of MacDuff in Noble’s production they challenge the purity of the child. The three are threatening in their abandon. Placeless, belonging to no one they roam the estate freely, a feral pack of anarchists. They trigger the action while evading sight. The audience only considers their role in events retrospectively. As Rutter notes, Woolcock’s witches are unsettling not only because they can predict the future, but because they are it (Rutter, 2008).

Noble and Woolcock’s production embodied the all too real fears of British society. Holding the mirror up to their audience they forced them to examine what many would rather deny. The ambiguity with which children are presented in both productions ruthlessly challenges the purity of childhood innocence. In doing so it illuminates the equivocation that saturates Macbeth, endowing it with moral consequences for its audience. The notion of evil dismissed as obsolete is disturbingly brought to life in contamination of the realm of play by abuser’s groping hands, thus evoking the visceral horror at the heart of Macbeth (Rutter, 2008).

While Noble and Woolcock appear to draw the audience to examine society, in the case of Polanski’s 1971 film the cultural context seems to forcibly inflict itself on audience perception. His first film following the brutal murder of his wife Sharon Tate, Macbeth cannot but bear the shadow of the Manson killings.7 The unsettling parallels between the violent, ritualistic world of Macbeth and Polanski’s personal tragedy have drawn many critics to speculate on the possible ‘cathartic effect’ of the film’s creation. While inseparable from the director’s personal trauma the film meditates heavily on the social and political context of 1960s America. In her work Mick Jagger Macbeth Deanne Williams examines how Polanski’s Macbeth explores

7 In 1969 Polanski’s pregnant wife Sharon Tate was murdered, along with four others at her home by members of a cult known as the Manson Family
the dark side of the combination of boundless individualism and a powerful sense of collective purpose characterized in the youth culture of the sixties (Williams, 2008).

Polanski’s choice of leading couple was notable in its youth and beauty (see Fig 1 (D’Angelo, 2014)). Jon Finch best known for his roles in Hammer Studios horror films such as the lesbian themed *The Vampire Lovers*, was cast in the role of Macbeth, alongside Francesca Annis as Lady Macbeth. With both actors in their twenties, Polanski dismissed the traditional interpretation of a middle-aged couple seizing their last chance at the throne stating: “It makes no sense to have Macbeth and Lady Macbeth performed by 60 year-olds and menopausals, It’s too late for them to be ambitious. Much more plausible for them to be young, sexy with their lives ahead” (Polanski qtd. in Shivas, 1971). For Polanski the Macbeths’ raw ambition belonged to the naivety and superficiality of youth. Here Macbeth’s journey is not one of corruption and self-awareness, but a loss of innocence, his actions leaving him world-weary, disillusioned and burdened by experience.

Fig 1. Francesca Annis and Jon Finch (D’Angelo, 2014)

Finch embodied the 60s anti-hero, abandoning the norm in pursuit of satisfaction. An enfant-terrible achieving fame for all the wrong reasons, Finch’s Macbeth was influenced in particular by the character of Turner played by Mick Jagger in the film *Performance*. Jagger depicts a debauched rock star offering refuge to a gangster on the run. The film emphasizes the performative quality of everyday life, exploring the nature of performance as well as the fluidity of gender and sexual identity. *Performance* heavily glamorizes the 60s mandate for peace and love as well as its more destructive aspects, in its portrayal of the burnout and murder of its self-destructive hero (Williams, 2008).
It is in his depiction of the witches that Polanski truly scrutinizes sixties counter culture. Mud spattered, singing songs around a campfire they evoke the harmless, idealism of the sixties hippy movement. Polanski depicts Macbeth’s encounters with the witches as a series of dalliances gone wrong. At first intrigued then mildly repelled by the witches, Macbeth resembles an inductee to a sixties cult, steadily and unconsciously ceding control. By the time he visits their coven their debauchery is revealed, it is dank and nauseatingly over-populated. The witches appear sub-human, ape-like engaged in collective grooming. The scene depicts the perversion of the hippy idealism epitomized in the earthy communalism of the Manson Family (Williams, 2008).

The film’s bleak and desolate landscape situates it firmly within the aesthetic of 60s avant-garde. Polanski was relentless in his pursuit of historical accuracy; using pelt furs, primitive wagons and large stone fireplaces he achieved a sense of chill and isolation that translated equally to the world of Beckett and the absurdist drama. Yet the adoption of this self-conscious medievalism had further significance, having much to do with a revival of interest in this period in the broader context of the 60s. The concept of ‘medieval’ gave focus to aspirations for a communal, uncultivated and innocent society. It was during this period that the Society for Creative Anachronism⁸ was founded, Renaissance ‘fayres’ grew in popularity and medieval traditions were recuperated through the performance of Corpus Christi plays in Leeds, Toronto, York and elsewhere. Depictions of Lady Macbeth as she awaits her husband’s return and the banquet scene in particular evoke the style of the sixties musical Camelot, a Broadway hit that provided the soundtrack for the Kennedy administration, ingraining it further in the cultural milieu (Williams, 2008).

Each of these productions are as steeped in their own cultural referent as the Macbeth of Jacobean England. In their contemplation of the play they strive towards a level of self-understanding. At the same time they add to the cultural memory of Macbeth, maintaining and developing the play’s resonance. Through reinterpretation of performance, emphasis and amplification of images and concepts already present in the text, markedly different productions emerge and yet remain Macbeth. Or do they?

What is Macbeth?

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⁸ An international living history group, with the aim of studying and recreating primarily European Medieval cultures and their histories before the 17th century
While many understand the text of *Macbeth* as a natural starting point for creative interpretation, for others it represents much more than this. The reverence bestowed on *Macbeth* has led to a natural desire to preserve its integrity, to protect the original Shakespearean work. This leads us to question what is the original work? The tangibility of the printed text has for many long fulfilled the need to point to the definitive work of *Macbeth* that as such can easily be replicated and protected from amendment or intervention.

However, though it may be somewhat satisfying and reassuring to consider the printed dialogue in itself as *Macbeth*, this seems to deny the inherent performative character of the play. As is the nature of performance, it is necessary to allow for variation be it artistic, cultural or contextual (Metcalfe, Paradis and Pettitt, 2010). The performance is unique, fleeting, elusive and as such beyond concrete definition. The concept of *Macbeth* as performance is thus not easily reconciled with our desire to preserve it.

Yet the text itself was printed as a result of its performance, and may be as much a product of oral and physical experimentation as written dialogue. The work we understand as *Macbeth* is derived from the only surviving printed version of the play, the 1623 folio. Unlike *King Lear* and *Hamlet* no alternative versions have survived, but almost certainly existed. Though the exact date of the play’s initial conception is not known, allusion to topical events as well as statistical analysis of Shakespeare’s evolving style, estimate it to have been around 1606. Theories persist that the play may have premiered in that year during a visit to England by the king of Denmark and it is thought that Shakespeare’s theatre company, The Kings Men, performed the play at The Globe in 1606 as well as at Black Friars from 1609 to 1616. Yet only one documented account of the play’s performance prior to its restoration survives.

The account in question by one Simon Forman, is of the 1611 staging at The Globe and is particularly interesting in that it reveals serious discrepancies with the folio and hence the play as we know it today. Forman’s account has no mention of witches or witchcraft, considered to be one of the central themes of the play and an indication of the context in which it was written. Instead the initial prophecies are attributed to faeries in a direct reference to terminology used in the *Holinshed Chronicles.*\(^9\) The disparity is extremely revealing suggesting the development of *Macbeth* was not a linear, but iterative process, whereby variation and

\(^9\) *Holinshed Chronicles* is a collaborative work, offering a multi-vocal view of British history. It is considered to have been a major source for Shakespeare’s *Macbeth.*
experimentation in the performance evolved the play from a stage adaptation of *The Holinshed Chronicles* to the pivotal work we know today (Moschovakis, 2008).

While speculation regarding the development of *Macbeth* is severely limited by the lack of documented evidence, the revelations of the Simon Forman account are further supported by examinations of the other tragedies. As previously mentioned, unlike *Macbeth* several versions of *Hamlet* and *King Lear* have survived to the present day. The work of *Hamlet* as we understand it today is derived from a combination of the second-quarto of 1605/06 and the 1623 Folio, yet examined in isolation these are significantly different works. Almost eighty lines appear in the Folio which have no referent in the second-quarto, while two hundred lines from the second quarto have been eliminated from the folio. The additions and editions result in vastly different readings in a number of scenes. One example of this is Hamlet’s apology to Laertes after challenging his grief following Ophelia’s burial and provoking him to violence. In the Second-Quarto the apology is preceded by the entry of an unnamed lord who states, “The Queen desires you to use some gentle entertainment to Laertes before you fall to play” (Shakespeare, *Hamlet*, act 5, scene 2, line 9)). While this line leads us to speculate that Hamlet apologizes to please his mother, its absence from the Folio would have us believe that the apology is genuine, resulting purely from empathy (Werstine, 1988).

Deciphering whether these changes were authorial, collaborative, the result of theatrical adaptation or interventions during transcription, is problematic. Yet the fact remains that the development of the work known as *Macbeth* was not a process that ended with its publication. The scale of some of the changes made suggest that the author revised aspects of the play throughout its performance and was thus informed and influenced by it. It is also widely accepted that styles other than that of Shakespeare can be identified in *Macbeth*, particularly in the scenes featuring Hecate (Moschovakis, 2008). This suggests that collaboration and external intervention were commonplace in the play’s development, constantly informed by its enactment. This evolutionary process speaks of the play’s roots in oral culture, whereby sustained thought and communication are intrinsically linked (Ong, 2013). *Macbeth* can thus be understood to be as much an oral as a literary creation.

Despite this the printed publication persists in the role of original work. The text on the page is for many the primary experience of the play. Yet a brief insight into the play’s development tells us that this text can only be one of many ‘original’ *Macbeths* and thus that the search for the original is in itself a futile exercise. Moreover preoccupation with the original text is not only extremely limiting, but misguided in many ways. The proclivity for the written text of *Macbeth* speaks
strongly of a deeply imbedded culture of literacy. Though by its nature Macbeth is a performance piece, there appears to be an inclination to comprehend it in terms of print.

While critic David Scott Kastan has repeatedly noted ‘Shakespeare’s apparent indifference to the publication of his plays’ (2001), there are those who contend that although written for the stage, Shakespeare's plays are primarily literary works. Indeed by the time the 1623 folio came to publication the concept of the plays as literary works to be read and interpreted in their own right was becoming firmly established. This is evidenced in the address by Heminge and Condell to, ‘the great variety of Readers’ and bearing the invitation to “Reade him, therefore; againe and againe” (Shakespeare, 1974b).

Textuality is deeply woven into the language of Shakespeare. The works themselves are full of literary allusions. As has been noted by Jonas Barish, of all Shakespeare’s plays the only one devoid of reference to any ‘stage document’, is The Two Noble Kinsmen. Barish contends that Shakespeare would not have considered speech superior to writing, creating as he does a world in which writing holds such importance (Barish, 1991).

Indeed the plays themselves are literary in nature often containing long descriptive narrative sections that theorist such as Johnson consider incompatible with drama in the first instance. For Johnson narrative and drama are antithetical. While drama draws the audience to view events as they unfold, narrative interrupts action, instead inviting the audience to listen (Tomarken, 2009). A. C. Bradley supports this criticism suggesting, “The process of merely acquiring information (narrative) is unpleasant, and the direct imparting of it is undramatic” (Bradley, 2010, p. 54).

It is this utilization of narrative as an aid to the imagination that makes Shakespeare plays entirely suitable for reading, in Bradley's opinion. Bradley goes as far as to suggest that Shakespeare’s plays can be read without experiencing any sort of deficiency, that Shakespeare’s expositions are so vivid that even readers without a ‘lively enough imagination’ are able to enjoy experiencing Shakespeare on the page. Johnson supports this argument suggesting the experience of the play as it is heard is akin to reading of narrative on the page, “A play read affects the mind like a play acted” (Tomarken, 2009, p. 136).

For others such as Francis Berry, the narrativity of Shakespeare’s writing is complementary to what is first and foremost a performative work. He describes the performance as both language and spectacle and therefore to be heard as well as seen. As an example of the dramatic function of narrative in Shakespeare’s plays he
uses a scene from *Hamlet* in which Ophelia describes an absent Hamlet who has appeared to her ‘with his doublet all unbraced’ (Shakespeare, *Hamlet*, act 2, scene 1, line 76). Ophelia’s description impresses the image more forcibly on the imagination than a physical representation. For Berry the effect of the narrative piece is not literary, but cinematic, creating a ‘close-up’ in the mind’s eye (Berry and Berry, 2005).

This is a view supported by the work of Rawdon Wilson who also believed narrative and drama could happily coexist. In the 1995 work *Shakespearean Narrative* he suggests that in Elizabethan literary practice, “the addition of narrative to drama should not have seemed perplexing: poetry and drama were ordinarily co-present and distinct poetic forms (the sonnet for instance), easily assumed roles within drama” (Wilson, 1995). Yet unlike Berry, Wilson does not view the use of narrative as purely a dramatic device, stating, “Shakespeare’s plays, narrative saturating them, are always more than drama.”(Wilson, 1995, p. 203) Here he appears to imply that Shakespeare’s plays although primarily intended for the stage seem to acknowledge their own literariness through their narrative and poetic elements.

**Multimedia Shakespeare**

What these arguments suggest more than anything is the ability of Shakespeare to be many things to many people. This combined with the cultural weight invested in Shakespeare has presented a number of challenges with regard to approaching his work in an educational context. When we consider this in conjunction with the evolving role of the narrative in the digital age discussed earlier in this chapter, *Macbeth* becomes a particularly interesting case. At once narrative and poetry, performance and literary work, conceived virtually at the juncture of oral and literary culture and utilizing cinematic devices centuries before the invention of the still photograph, Shakespeare is every inch the multimedia work. Both in its story and the varied conceptions of it, *Macbeth* reveals much of the continually evolving relationship between media, literacy, orality and perception. As educators begin to reflect the evolving technological, social and cultural landscape, how will this manifest in our approach to the *Macbeth*? Can digital media itself facilitate this process? Indeed can digital culture develop new experiences of *Macbeth* extending the play’s cultural life?

**Challenging Reverence, Cultivating Ownership**
In her essay ‘I See a Voice: Visual Approaches to Teaching Shakespeare’ Merrilyn Evans describes her attempts to address the challenges of exploring Shakespeare in the contemporary second level classroom. Evans utilizes a multimodal approach, acknowledging not only the changes in perception and expectation of contemporary students in a general sense, but that these also vary between individuals. She uses diagrammatic, pictorial, televisual and physical techniques in order to attend to auditory, visual and kinaesthetic learning styles. Students are encouraged to explore imagery and abstract concepts by physically representing them, whether through frozen body movements, drawing or multimedia creation. Evans introduces them to archival images and film adaptations. Students thus begin to develop an insight into how imagery can influence meaning and atmosphere. In this way Evans attempts to break down the reverence held towards the text, by encouraging students to take ownership of it, examining it in a way that is personally meaningful (Evans, 2000).

The issue of reverence is particularly pertinent. In his book Narrative Approaches to Shakespeare Rex Gibson also explores the implications of the esteem in which Shakespearean texts are held, for student engagement. Like Evans, Gibson encourages his students to encompass the narrative, employing an, ‘active storytelling’ method. Gibson acknowledges the need for personal relation with human characters. In this vein he develops the idea of the narrative as a series of events, involving multiple viewpoints and actors. Students are encouraged to develop the stories of peripheral characters or act out events merely alluded to in the text. In this way students begin to imaginatively inhabit the text, aiding empathetic identification with characters, sharpening insights into relationships between characters and comprehension of the moral, political and social landscape (Gibson, 2000).

Both Gibson and Evans illustrate an appreciation for the importance of active involvement. By encouraging creative engagement with the story, students begin, not only to understand, but to think critically about the narrative. These concepts are also foundational to The Royal Shakespeare Company’s ‘Stand up for Shakespeare’ initiative. The RSC approach is centred on this concept of ownership and creative engagement. Originating as a manifesto, ‘Stand up for Shakespeare’ contrasts the primary experience of Shakespeare encountered by students as readers in their English classroom, preparing for examinations with that of the theatre group collaborating and actively working with the plays. The RSC favour this approach as the most engaging way for children and young people to develop a real understanding of Shakespeare’s stories, characters and language. Through this
philosophy and engagement with hundreds of teachers, students and policy makers
the RSC developed three underlying principles for teaching Shakespeare; that
students should do it on their feet, see it live and start earlier ('Stand Up For
Shakespeare,' 2008).

The concept of, “doing it on their feet” is rooted in a theatre-based approach
advocating an active process of exploration. Students experience the text in manner
akin to that of an actor, as a member of an ensemble, moving and speaking the text aloud and exploring feelings and ideas as they emerge. Intellectual responses to the
text are accompanied by the emotional and physical. This process acknowledges
the potential of kinaesthetic learning. By engaging directly and physically with the
words and rhythms of the text, students begin to comprehend complex language
and thought processes, stimulating intuitive, personal responses ('Stand Up For
Shakespeare,' 2008). Here the sense of ownership advocated by Evans and Gibson
is achieved through collaboration and the development of a shared understanding of
the play.

In contrast to the contentions of A. C. Bradley for the RSC the script is like a
musical score, telling only half the story. Seeing, hearing and feeling the sounds,
rhythms and words is a sensory experience that aids comprehension in a way that
reading alone could not hope to achieve. Horror, suffering and humour, frequently
lost on the page are brought to life, the touching and devastating humanity of
characters realized. Whether a professional production or performed by the
students themselves, the shared experience of live Shakespeare is crucial ('Stand
Up For Shakespeare,' 2008).

In an approach that echoes the arguments of Robinson, by introducing
Shakespeare at primary level the RSC hope to tap into children's natural instinct for
play. While many students at this stage respond well to drama techniques, engaging
with stories and dilemmas, when invited to comment on a literary work they
frequently struggle. Introducing Shakespeare at this stage avoids a great deal of the
challenges posed by self-consciousness. These feelings are often at their most
intense during the early teenage years when Shakespeare is typically first
encountered in the curriculum. Self-consciousness can seriously inhibit the active
ways of working, important for generating positive initial comprehension. Added to
this, the later Shakespeare is introduced the higher the likelihood that students will
already have formed negative preconceptions. The ‘Stand up for Shakespeare’
manifesto has been developed into a toolkit for teachers offering practical classroom
activities (2008).
Digital Embodiment

The concepts underlying the techniques of Evans, Gibson and the RSC speak to the inherent multimodality of Shakespeare as well as the evolving condition of students. While these approaches do not expressly utilize digital media itself, the ubiquity of digital technology and its potential as a communicative and multimedia platform have drawn many educators to consider how technology might facilitate engagement with Shakespeare. In recent years a number of collaborations between cultural institutions, academic publishers, universities and developers have sought to explore how the very principles identified by Evans, Gibson and the RSC among others might be embodied in a technological approach, resulting in the release of a number of digital learning resources.

The notion of incorporating the theatrical process of interpretation and creation into education, for example has manifested in several digital learning resources. The National Theatre’s A Conversation with Sir Ian McKellen is one such web based application designed by Martin Percy. The application is based around a series of interactive videos exploring Shakespeare's Richard III, with Ian McKellen fulfilling the role of advisor and guide (see Fig 2 (Percy, n.d.)). Percy wanted to create an alternative to the linear lecture, instead creating a more interactive experience. The application is entirely user driven, requiring the selection of a question in order to progress. McKellen in turn responds to the answers selected. In this way while explaining the language, context and morality of the play, McKellen compels the user to engage and think critically. The tone is personal, indeed conversational as the name suggests. The structure and informality of the process result in an active experience (Percy, n.d.).
Fig 2. Ian McKellen invites user to answer a question regarding historical accuracy of Richard III and provides a response in line with the selection (Percy, n.d.)

Like the RSC, the National Theatre application explores the concept of interpretation, demonstrating the malleability of the text. McKellen introduces a series of adaptations of Richard III’s opening scene, including his own performance in the 1995 film, Laurence Olivier’s 1952 film and Conrad Nelson’s 2006 stage portrayal. McKellen alternately describes the implications of each depiction, emphasizing the validity and cultural significance of their variations. He thus illustrates the importance of creative engagement in the story, encouraging users to follow suit.

Although drawing students to consider the play and actively engage, *A Conversation With Sir Ian McKellen* is limited in that the multiple choice framework means that users can only select responses and opinions offered to them. While the Ian McKellen app offers an interactive and stimulating environment through which users can explore many aspects of the play at their own pace, *Hamlet – Minds Under Stress* (also designed for the National Theatre) was developed with a more collaborative learning approach in mind. An interactive whiteboard application *Hamlet - Minds Under Stress* is designed specifically for A-level students. The application is based around an in-depth exploration of the A-level comparative theme Minds Under Stress, from which it takes its name. Each section of *Minds Under Stress* seeks to stimulate conversation and analysis in both teachers and students ('Hamlet - Minds Under Stress, A Flip Chart For Interactive Whiteboards,' n.d.).
Like the RSC approach and Percy's McKellen app *Minds Under Stress* draws on the process of theatre creation to illustrate the necessity for interpretation and creation in approaching *Hamlet*. Extracts from the National Theatre's live broadcast of Nicholas Hytner's *Hamlet* are combined with interview footage of artists discussing elements of the play. The application focuses on five key moments in the play; Hamlet's soliloquies in Act One Scene Two, Act Two Scene Two and Act Three Scene One as well as Ophelia's speech (Act Three Scene One) and mad scene (Act Four Scene Five). The application aims to create a platform for discussion around *Hamlet* as a performance. A side bar offers questions and activities that aim to encourage a more focused insight into chosen key moments while at the same time developing the students understanding of language and context (*'Hamlet - Minds Under Stress, A Flip Chart for Interactive Whiteboards,'* n.d.).

Similarly, The Globe's online resource *Globe Education Shakespeare: Macbeth Dynamic Learning* emphasizes the concept of the play as a performative work. The digital resource is designed as an accompaniment to a printed version combining the text of the play with a number of images from various Globe productions. In a manner similar to that of *A Conversation With Sir Ian McKellen* and *Hamlet – Minds Under Stress* the concept of interpretation is introduced through actor's viewpoints. The digital service facilitates this feature in allowing for users to hear actors discussing their interpretation of their character and motivation within a scene, in a number of audio clips. The concept of the play's visual and performative dimension is developed through a series of video clips. The clips featuring rehearsals and a variety of Globe productions are linked to pages in the print edition. An introduction by Fiona Banks, head of Learning Globe Education outlines what the user is about to see as well as inviting them to consider why certain decisions regarding, production, performance and staging may have been taken. This feature seeks to elicit a personal response from students (*'Globe Education Shakespeare – Macbeth,'* 2011).

As with *Minds Under Stress* collaborative learning is central to the design of this resource. While the book features a variety of activities that strive to familiarize students with concepts such as characterization, the digital element serves to allow these to be experienced as a group. For this purpose the application is recommended to be used with an interactive whiteboard, facilitating debate and social engagement. Among the exercises are a number of photo activities. Students are drawn to examine photographic images of various scenes and are then invited to answer questions regarding particular staging choices, why these may have been
made and what impact they may have had on the perception of the scene and the overall production.

In a manner akin to that of the RSC, the Globe resource draws on exercises used by actors, to facilitate physical, collaborative engagement. An example of this is a group task involving iambic pentameter. The exercise invites the group to repeat “Sha-boom” five times, while clapping the syllables. The activity is then repeated with “Sha-boom” being replaced by the first two lines of Macbeth’s soliloquy in Act Two “Is this a dagger which I see before me, The handle turned toward my hand? Come, let me touch thee” (Macbeth act 2, scene 1, line 34). The instructions note that some lines do not fit, some being longer and others shorter. The group is then invited to draw three parallel lines on a sheet of paper before reading and clapping through the soliloquy. For each line that has ten beats an ‘x’ is marked on the middle line, on the higher line if it is greater than ten and the lower if less. The group is then instructed to join these lines and asked, “What does this tell us about Macbeth’s feelings?” and “What might Shakespeare be asking his actors to do when there are fewer than ten syllables?” (‘Globe Education Shakespeare – Macbeth,’ 2011).

Rather than a contained application the Globe is a collection of resources. It is designed for inclusion in existing teacher lesson plans as opposed to student-led learning. Unlike the applications previously discussed The Globe resource provides a more specific course outline for teachers. As well as group tasks such as the one outlined above, scene by scene teacher’s notes are provided in order to support the student books. As well as this teachers are provided with a guide advising how to support student’s learning for GCSE English using the Globe Education Shakespeare. As with Minds Under Stress, the Globe’s resource is designed with a particular academic stage in mind, seeking to cater for eleven to sixteen year-olds progressing towards GCSE exams. The resource thus includes a number of features particularly targeting exam technique including a ‘How to write a good response’ section advising on English GCSE answers and Controlled Assessment tasks, tutorial presentation examples for each Assessment Board with student responses and zoomable key scenes with separate examiner’s notes (‘Globe Education Shakespeare – Macbeth,’ 2011).

What is interesting about The Globe application, Minds Under Stress and A Conversation with Sir Ian McKellen is that they portray the plays as living works of art, with which directors, actors, set designers etc. are still struggling to interpret, inhabit and depict. In this way they alleviate the burden of reverence surrounding Shakespeare by demonstrating that there is no point at which one 'knows'
Shakespeare, rather it is a continual process of examination, evolution and discovery. As such, these resources align the process of theatre creation with that of a student, promoting the concept of ownership discussed earlier by Gibson, Evans and the RSC.

For groups such as these the ability to explore Shakespeare through multiple media forms makes digital technology an obvious platform through which to convey the physical, aural and visual dimension of the plays. While these applications utilize this potential to convey the creative process of performing, another application *Shakespeare in Bits* demonstrates how digital media forms themselves might convey the plays. The Ipad application created by MindConnex combines Adobe Flash animation with the Naxos Audiobook version of the play. The Flash animation is viewed alongside a synced textual version of the play that automatically highlights text as the animation progresses (see Fig 3 (‘Shakespeare In Bits,’ n.d.)).

![Fig 3. Synced text and Flash animation on the *Shakespeare in Bits: Macbeth iPad Edition* (‘Shakespeare In Bits,’ n.d.)](image)

Much like the other applications discussed *Shakespeare in Bits* seeks to facilitate a multimodal approach to Shakespeare’s plays. By incorporating graphics, audio and textual elements the application aims to engage visual and kinaesthetic learners as well as those with an inclination toward logical or mathematical learning styles more commonly catered to by established teaching methods. The application emphasizes that Shakespeare's plays were created primarily to entertain and through an
interactive approach designers attempt to break down many of the typical barriers students encounter when approaching Shakespeare, promoting an enduring appreciation for his works ('MindConnex - Learning Made Easy - For Educators,' n.d.).

The text also includes embedded translations which can be viewed by clicking on more obscure lines. Character names can also be clicked allowing users to retrieve a synopsis of the chosen character's traits as well as their role within the play. This information can also be accessed through a dedicated 'Characters' section. A scroll bar enables users to navigate to different sections in the scene each of which comes with its own notes section. Along with this every scene has a dedicated synopsis page. The application also features an element covering analysis which includes a textual description of the play under the categories ‘Themes’, ‘Imagery’, ‘Language’, ‘Quotes’, ‘Plot Summary’ and ‘About Shakespeare’.

The various interactive features of the application strive to present Shakespeare in a form that is more familiar and engaging to the contemporary student. As with Minds Under Stress and The Globe resource, designers were keen to encourage collaborative engagement and social interaction around the text. It was felt that used in conjunction with an interactive whiteboard the various navigation tools could facilitate this process in permitting students and teachers to explore the work at their own pace. However, aside from this Shakespeare in Bits does not provide features specifically designed to facilitate collaborative learning ('MindConnex - Learning Made Easy - For Educators,' n.d.).

While Shakespeare in Bits is founded on the principles of multi-modal learning as well as the ability of technology to recreate and extend our experience of the plays, others such as The Cambridge University Press Ipad application Macbeth: Explore Shakespeare as well as a version for Romeo and Juliet are more aligned to Bradley's notion of the plays first and foremost as literary works. The application created by CUP in collaboration with developers Agant seeks to make the plays accessible to casual readers. As such while having some potential for academic application, it is not expressly aimed at students. As Agant's managing director David Addey describes, “The thing we wanted to achieve more than anything else with these apps was to give people a way into the plays, particularly if they had never studied Shakespeare before, or found it intimidating.” (qtd. in Dredge, 2012).

Macbeth: Explore Shakespeare is centred on what the publishers describe as “the definitive texts” (Dredge, 2012). While readers may at any point access
photographs of professional productions, glossary definitions, plot summaries and articles by experts, these interactive features are merely auxiliary to the text, seeking to expand it, helping users to understand and enjoy it. As with the *Shakespeare in Bits* application, *Macbeth: Explore Shakespeare* features the Bruce Alexander and Fiona Shaw audio performances for Naxos Audio Books (Shaw et al., 1998). Users may listen to the recording while reading the text or exploring other sections. Another feature similar to that of *Shakespeare in Bits* is the embedded clickable text. Users can tap on words or phrases less common in contemporary language to retrieve an explanation. The application also includes interactive word clouds for scenes and characters (see Fig 4 (Lynch, 2012)). These allow users to view words most frequently uttered by individual characters and how these are used. A number of diagrams are also included. One feature entitled ‘Circles’ uses such diagrams to demonstrate the relationships between characters in different scenes, while ‘Themelines’ employs them to illustrate how key themes present themselves in the text.

Fig 4. Interactive text and word cloud (Lynch, 2012)

Unlike other apps discussed CUP were purposeful in their exclusion of video performances, feeling these would only serve to take users further from the text. As John Pettigrew, CUP’s digital strategic development manager puts it, “If you include video, people will watch the video and they won't look at the text: you physically can't watch and read at the same time” (qtd. in Dredge, 2012). While users have the
option of delving into analysis and themes, these are secondary to the text of the
play itself, the primary aim being to demonstrate the value of the story at its centre.

While all these applications strive to extend our experience and
understanding of the plays themselves, the potential of digital media to provide
access to and enhance existing resources has also been utilized in the case of
Shakespeare. With the development of The Shakespeare Quartos Archive it is
possible for the first time to view quartos side by side. The archive is a freely
available resource that in time will reproduce at least one copy of every edition of
Shakespeare’s plays printed in quarto before the theatres were closed by the
Puritans in 1642. Currently there are 32 copies of Hamlet available to view, all
contributed by the project’s partner institutions, which own the majority of the pre-
1642 quartos: Bodleian, the British Library, the University of Edinburgh Library, the
Folger Shakespeare Library, the Huntingdon Library and the National Library of
Scotland (‘The Shakespeare Quartos Archive,’ 2010).

The archive renders the history of the plays accessible and comparable
aiding comprehension of how they developed, the implications of this for the plays
themselves and their context, while protecting the original artefacts. However the
website does not merely offer a photographic reproduction. Each edition can be
viewed as fully searchable text or as manipulable and zoomable high definition
images, users having the ability to switch between views with minimum effort. The
archive includes a variety of interactive features that were developed in line with
suggestions by academics. Among these is the ability to overlay different additions
onto one another, adjusting opacity as desired, to facilitate comparison (see Fig 5
(‘The Shakespeare Quartos Archive | Video Tutorials,’ n.d.)). As has been noted by
senior lecturer in English at Royal Holloway, Christie Carson, this facility allows the
user to identify differences and explore their implications for the performative history
of the work. She cites Hamlet as an interesting case with placement of, “to be or not
to be” (Shakespeare, Hamlet, act 3, scene 1, line 57), being a crucial factor in the
development of Hamlet’s character, with which contemporary productions continue
to make interesting choices (Tickle, 2010).

Lecturer in Shakespeare and Renaissance literature Ben Burton notes the
functions effectiveness in encouraging students to contemplate how discrepancies
between the editions influence the way the work is interpreted. Burton builds on this
concept with his own students by directing them to edit, “to be or not to be”
(Shakespeare, Hamlet, act 3, scene 1, line 57), making their own decisions
regarding punctuation in light of differences discovered in the quartos. For Burton
the archive was ideally suited to this task, enlivening a form of textual analysis that was for many students dull and obscure (Tickle, 2010).

Users also have the ability to mark and tag text with their own annotations which can be kept private or made public. Annotations on multiple quartos can be saved into a single 'set'. This allows users access to all the annotations they have created along with a series of public annotations. As well as this, sections of the quarto can be cropped and downloaded for reference. Users have the ability to save and share screen states containing a variety of quarto views, crop details and annotations as 'exhibits'. Gabriel Egan, a member of the archive's advisory forum, has stated that a central concern was that the archive should not only be freely available, but also manipulable by its users. As with the creation of any application, the most exciting uses are not always apparent at the moment of creation, but emerge in the creative behaviour of users over time (Tickle, 2010).

This lack of clarity with regard to the potential applications or benefits of digital media is perhaps what is most at odds with current notions of education. The majority of the applications discussed seek to harness the positive potential of digital technology for creation, engagement and collaboration. These principles are to a large extent student-centred. Given the nature of the individual, such a focus is not easily quantified and thus runs counter to the principles underlying education systems. Yet as discussed earlier in this chapter, culture is a fluid entity. Bruner notes that narrative is essential for informing our conception of this culture. While
narrative forms evolve it is vital that education respond to this if it is to align itself with our comprehension of society. Without such a response education becomes an isolated experience, alien and distinct.

In seeking to respond to evolving expectations of narrative these applications underline this. By attempting to harness the potential of digital technology, they not only strive to remake education in the image of contemporary society, but to grant access to stories conceived in a different age, thus acknowledging our place in human development. While somewhat restrained by notions of passivity and prescription so deeply embedded in educational approaches, these resources add to the rich history of reinterpreting and examining *Macbeth*, creating a new experience of the play that is in many ways more in tune with the oral and performative aspects inherent in *Macbeth*. Yet as noted in the Joan Ganz Cooney Center studies, collaboration with educators is essential if this process is to be of true educational benefit (Chiong, Ree and Takeuchi, 2012). As such, this research seeks to extend the principles of creative and analytical engagement, exploring the potential of digital media to rectify the disjuncture between formal learning contexts and contemporary perceptions and expectations of narrative.

**The Role of Technology**

**A Means, not an End**

While it is likely that a realignment of this disjuncture between formal learning contexts and contemporary perceptions and expectations of narrative would encompass technology, in much the same way as technology is simply one instrument in the repertoire of a skilled teacher, the addition of technology into the education system as a whole can only serve as a benefit to the extent that the nature of its application permits. When we consider the findings of Wesch, Snow and Robinson discussed earlier in this chapter it must be acknowledged that the introduction of technology into the classroom is unlikely to embody any significant or meaningful educational intervention until a serious shift in the culture of teaching and learning has occurred. Rather in the absence of such a shift it is entirely possible and indeed probable that the same problems could be perpetuated using technology.

However, though what is required is nothing short of a complete re-evaluation of pedagogical approaches within such a reformed system technology would have a significant role to play. While not a solution in itself, within an education system where values have been refocused on supporting and developing
skills such as problem solving, creativity, analytical thinking and collaboration, technology could offer numerous opportunities to facilitate new ways of learning, more attuned to the culture of connectivity.

The wide availability of technologies such as cameras, drawing, animation and image manipulation tools provide a number of opportunities for self-expression, while the development of editing tools mean that these ideas can be experimented with freely. Added to this, such creations can be shared and discussed on a global platform. In many cases educators and policy makers have acknowledged the potential of such tools, slowly and tentatively we are beginning to see the integration of digital skills and technology into the classroom (Ohler, 2008).

Yet as Wesch notes, while it is now ridiculously easy in a technological sense to create, organise, share, collaborate, collect and publish, doing so in a meaningful way remains ridiculously difficult. Real creativity and critical thinking (or what Wesch terms knowledgeability) is not a list of items that can be accumulated, it is a practice. As such in guiding students towards this knowledgeability we must embrace real problems with them as well as harnessing the relevant tools. Students may thus begin to move beyond seeking meaning and towards creating meaning (Wesch, 2014). In this way embracing an educational approach that better prepares learners to function in society as well as to realise the potential of their own abilities is much aligned with some of the most basic principles of Constructivism, you create meaning in the same way that we create ourselves and our world (Ohler, 2008).

**Digital Storytelling – What is it?**

The power and significance of the story in enabling humans to create a sense of clarity and meaning has been noted on numerous occasions throughout this chapter. Stories help us to organise and make sense of the chaos of life as well as create a sense of personal identity in relation to our communities. Indeed much of our communication consists of stories (Ohler, 2008). Baring this in mind the potential for creative expression presented by the advent of digital culture raises a number of exciting possibilities for the integration of narrative and exploratory learning into our education systems. While offering students the tools to explore concepts and create a sense of order in relation to their studies, so too does it allow them to pursue academic content in their own language (Ohler, 2008). This research will therefore consider the potential of digital storytelling as an effective intervention into the current study of *Macbeth*.

Digital storytelling is a loose term that can broadly be described as the process of combining a variety of media to create a coherent narrative using
technology (Banaszewksi, 2005). These stories are relatively short in length with the voice of the storyteller being central to the composition of the piece, this is embodied via live oral presentation offered as an accompaniment to the visual and musical elements or as a recorded voiceover embedded in the piece itself, this is combined with still and video images as well as text. These elements are then brought together in a video editing application such as Adobe Premiere or Apple’s iMovie to produce a digital video that is of sufficient quality for web streaming, broadcast or DVD distribution (Ohler, 2008). In an educational context these stories generally have an academic goal and utilise low end, easily available technology, taking the form of short movie-like presentations (Burgess, 2009).

**Background to Digital Storytelling**

Many of the ideas around digital media have been developed and propagated by the Center for Digital Storytelling based in the University of California in Berkeley. Founded in 1994 the work of the centre is firmly rooted in the principles of oral and performative art forms, having emerged from an existing arts community in the Bay area of San Francisco in the 1970s and 80s, with a particular interest in voice and the disparate forms through which the personal narratives of different individuals could be expressed. Underlying much of the work involved in this movement was the concept that art was not the reserve of a gifted few, but should be accessible to all, particularly those traditionally left behind. As such, it was very much in line with the more accessible and pragmatic understanding of creativity earlier discussed. The work of these artists along with a broad range of collaborators gave voice to a wide range of effecting stories concerning harm, healing and hope, on a background of social and political conflict. This work initially manifested in an interest in contemporary storytelling and solo performance (Lambert, n.d.).

At its earliest stages of development one of the pioneers in this area was video producer and graphic artist Dana Atchley. A Yale MFA and developer for Apple computers, Atchley’s work was particularly interested in personal storytelling and archiving. Atchley himself possessed a vast collection of personal and historical, family images which featured prominently in his work. Atchley’s most significant piece in relation to the development of digital storytelling was a show entitled *Next Exit*. Combining spoken word, music, photography and video, *Next Exit* was an autobiographical, multimedia performance piece. The work was simply constructed and consisted of Atchley telling stories about his life with multimedia clips being projected onto a screen behind. Each performance was a response to the audience and thus unique. Members were invited to select twelve or so of the
seventy possible vignettes to feature in the show. Transitions were triggered via a wireless mouse following significant oral introductions provided by Atchley (Lambert, n.d.).

This show became a symbol of grounded new media and how it could be used to tell stories about people and their lives. Following a tour in the early 90s Next Exit gained a significant amount of attention from a variety of groups and individuals all interested in creating similar works themselves. However, at this time doing so was expensive and required a number of technical skills. With the advent of digital video such forms of expression became much more accessible, enabling people with little or no multimedia experience to produce powerful digital stories.

In 1993 Next Exit was brought to The American Film Institute as part of The International Festival of Video. In conjunction with this performance Atchley staged a three day digital storytelling workshop. The interest centred around Next Exit combined with the workshop laid the groundwork for Atchley to establish the San Francisco Digital Media Centre along with Next Exit’s producers Joe Lambert and Nina Mullen in 1994 (Lambert, n.d.).

The centre was initially envisaged as a community arts workshop with a remit of assisting people such as activists and educators to tell stories about their work. Over the subsequent three years the group developed a curriculum in order to impart digital storytelling skills to a variety of groups and individuals. In 1998 they were invited to the University of California, Berkeley to work with their faculty in exploring the use of digital media in K-12 education and became the Centre for Digital Storytelling. Since then the centre has expanded their work to engaging with a number of groups globally.

Among these was a collaboration with the BBC which culminated in a project entitled Capture Wales. The seven year project involved the collection of 800 digital stories from small towns throughout Wales, resulting in the generation of wide interest in digital storytelling throughout the UK and the initiation of a number of similar projects. In the past number of years the work of the Center for Digital Storytelling has begun to focus on the potential of digital storytelling in social services areas and principally how digital storytelling can be utilised to give a voice to those who have none. Issues explored by the centre include gender based violence, foster care, the effects of public healthcare on cognitive behaviour and issues surrounding visible and invisible disability (Lambert, n.d.).

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10 This is a term referring to the sum of primary and second level education
Educational Potential of Digital Storytelling

‘The Seven Elements of Digital Storytelling’, developed by the centre is one of the most widely used frameworks for digital storytelling. The seven elements address factors intrinsic to the creation of an effective digital story, such as conveying your message, raising the key question of the story, engaging the emotions, the power of the narrator’s voice, the effective use of music, sound effects and economy (Sweeney-Burt, 2014). Of particular significance with regard to these techniques is what separates digital storytelling from multimedia or slideshow presentation, the engagement with narrative or story literacy. As such, emphasis should not focus on the application of technology in order to complete a specified curricular goal, but on the engagement of the student in driving the learning experience and employing technology in order to achieve that goal. Rather than simply repackaging information from a variety of sources, students must synthesise what they have learned with their knowledge of themselves and of their world, revealing the significance of what is being conveyed (Banaszewksi, 2005).

Digital storytelling therefore involves application of not just learned technological skills but the utilisation and development of intuitive ones, often neglected in traditional educational contexts, such as collecting and arranging textual elements and oral performance of personal stories. Through digital storytelling such skills are embodied in combination with sonic and visual elements to create a televisual flow, a technique which in many cases students have acquired a degree of intuitive knowledge of through consumption of film, television and animated media (Burgess, 2009).

Indeed digital storytelling has the potential to encourage a number of activities which are much aligned with the benefits of engaging in drama. Examples of this parallel, including that digital storytelling compels the student to research in order to formulate an informed narrative response to issues raised within their learning material are perhaps unsurprising when we consider the roots of digital storytelling in performance (‘Storytelling As A Pedagogical Approach For Development Education,’ n.d.). As noted above the unique voice of the storyteller is central to the creation of the digital story, thus presence and narrative accessibility are prioritized over formal experimentation or innovative use of technology. Technology is an amplifier of both good and bad, for better or worse it will expose the quality of the student’s narrative. Students must be guided towards utilising technology in a way that strengthens their stories, rather than focusing on the acquisition of technical skills (Ohler, 2008).
Reassessing Literacy

Digital storytelling compels students to synthesise the skills of performance, the arts and oral storytelling with knowledge of digital technologies. In doing so students must be able to recognise and apply the skills of storytelling literacy to oral, visual as well as print media. Therefore, while harnessing the benefits of oral storytelling and performance it compels students to combine the skills associated with such practices and an exploration of a variety of other semiotic systems. As noted above the rise of digital technology has resulted in a media saturated world, presenting a number of questions regarding how best to ensure that students benefit from their learning in ways that allow them to participate fully in public, community and economic life. Preparing students to negotiate and function in such an environment invites us to reflect on what it means to be fully literate in the contemporary era (Cazden et al., 1996).

The proliferation of a variety of different text forms associated with multimedia technology compels students to obtain an understanding and competent control over modes of communication that are becoming increasingly significant, such as the visual. The three Rs are no longer enough. In the working world we are seeing increasingly a demand for flexibility. In western economies more and more there is a move away from the division of labour into its most minute deskilled components in favour of multi-skilled, well rounded workers, who can participate in integrated work.

This can be largely attributed to a departure from Fordism in favour of a Post-Fordist economic model. Whereas Fordism was mainly focused on the manufacturing of goods, in the case of the Post-Fordist approach services including leisure facilities, retail and finance are as important. Added to this within the Post-Fordist model, markets are no longer mass and undifferentiated. Rather there are multiple markets with specialized needs and demands. These demands are being met by both manufacturing and services industries through the development of digital technologies, facilitating for example the high speed transfer of information or the development of ‘just in time’ production. This allows industry to quickly respond to the needs of the consumer.

As such, organisations operating within this model must be receptive and flexible, innovating constantly. They thus require versatile and multi-skilled workers (Lawson et al., 2009). This trend was reflected in an interview with Google CEO, Adam Bryant for the New York Times in which he cited general cognitive abilities including an ability to make connections and a willingness to learn, as key attributes applied to hiring across the company (Friedman, 2014). “It’s not I.Q. It’s learning
ability. It's the ability to process on the fly. It's the ability to pull together disparate bits of information.” (qtd. in Friedman, 2014). While it is not the role of education to produce docile, compliant workers, students must be prepared for the demands of such an environment, if they are to make themselves heard and engage critically with the conditions of their working lives (Cazden et al., 1996).

Along with the abundance and significance of a variety of media formats, the context of increasing cultural diversity and globalised societies also compel us to extend and reassess our concept of literacy. Dealing with linguistic and cultural differences is now a central part of our working and private lives. While technological advances such as desktop publishing have elevated the visual to a status far superior to that of when the tasks of writing and page design were two separate trades, this rise can also be attributed to the fact that visual communication has become a form of Esperanto for the Global Village. To a large extent local diversity and global connectedness have undermined concepts surrounding imposed standards. Rather than the mastery of such a standard, some of the more important skills for contemporary students are negotiation and engagement with regional, ethnic and class based dialects, variations in social context, cross-cultural discourse, visual and iconic meanings as well as gestural relationships among people, to name a few (Cazden et al., 1996).

Certainly such changes present a number of significant challenges, however it is vital that cultural and linguistic diversity become a central classroom resource, not to provide a ‘service’ to ‘minorities’, but to improve the educational experience for all students. By exposing students to a variety of different languages, discourses, styles and approaches, they are drawn to broaden their linguistic and cognitive abilities, as well as their capacity to reflect critically on complex systems and their interactions. This should be facilitated in such a way as to allow students to confront real conflicts of power and interest, rather than introducing diversity in a tokenistic manner. In this way differences can be recognised by such means as to complement each other, while at the same time students are granted the opportunity to expand their cultural and linguistic repertoire enabling access to a broader range of cultural and institutional resources (Cazden et al., 1996).

Digital Storytelling and Multiliteracies
With societal structures and technologies of meaning changing so rapidly there cannot be one set of standards or skills that constitute the ends of literacy learning (Cazden et al., 1996). In order to adequately prepare students for the needs of the digital world, schools should be compelled to move from a narrow understanding of
literacy to the development of a broad spectrum (Eisner, 1991). For over a decade The New London Group, a coalition of teachers and media literacy scholars have been working to address this challenge. In their efforts to reform traditional definitions of literacy they have formulated the term ‘Multiliteracies’. Multiliteracies encompass a mastery of a variety of semiotic modalities including linguistic, visual, audio, gestural and spatial deemed to reflect more appropriately the demands of life in the contemporary era (Cazden et al., 1996).

Digital storytelling potentially offers an appropriate and practically implementable response to this shift in familiarising students with challenges and nuances of each of the modes of meaning mentioned above. In the scripting and formation of story structure students are drawn to engage their comprehension of linguistic communication. This has an added dimension in cases where students are compelled to accompany their stories with an oral presentation as opposed to utilising an embedded voice recording, in that students must consider the implications of performance, live vocal delivery and intonation. Presenting their stories in this way also challenges the student to consider the gestural and spatial elements of their performance and how this will inform the impact of their story. The combination of these elements of oral storytelling and performance with still, moving image, as well as music to create a meaningful narrative will engage the students’ understanding of audio and visual semiotics. While requiring the ability to effectively recognise and emulate storytelling techniques in print, oral and visual media, digital storytelling involves the remediation of these vernacular, creative skills to new media contexts (Burgess, 2009).

Digital storytelling also offers the benefit of transforming the process of storytelling from educational experience to shared public culture. In this way digital storytelling offers the possibility of utilising the potential of technology to connect, thus amplifying the voice of the student, legitimising it to a certain extent as an autonomous and worthwhile contribution to public culture. This not only has the benefit of enhancing possibilities for discussion and peer learning, so too does it foster greater connection (and hence meaning) between wider cultural and educational experiences, thus offering potential advantages for both. Digital storytelling can therefore be seen as an example of creativity (and education) as social communication (Burgess, 2009).

In the rush to integrate technology many schools have overlooked the importance of multiliteracies, favouring instead the development of tool literacy, yet developing such an understanding is vital if students and teachers are to make sound use of the advances increasingly available to them (Banaszewski, 2005).
positioning multiliteracies as a foundational principle of communication through technology, students not only benefit from the creative and communicative potential offered by such tools, their skill literacy becomes exponentially more applicable and meaningful.

**Digital Storytelling and Experience**

**External and Internal Experience**

Along with the potential offered by digital storytelling in regard to the development of ‘multiliteracies’ it is also interesting to consider the processes involved in the creation of such works in relation to John Dewey’s concept of experience and education. What has been discussed thus far with regard to prevailing educational paradigms can be understood in terms of what Dewey describes as a traditional educational approach. This approach perceives learning material as a finished product, to be delivered in an essentially static manner. Such a method of inquiry reserves little consideration for processes that originally formed this product or the changes that will surely occur in the future. It therefore reflects a culture that assumed the future would remain broadly similar to the past (Dewey, 1998). Yet as we have thus far seen, the contemporary student is compelled to function in a society where change is the rule rather than the exception.

In response to this approach which is essentially external in its focus, Dewey favoured greater consideration of the internal experience of the student throughout the learning process. What is here termed as external refers in the main to objective conditions which are in the power of the teacher to regulate. For Dewey actual experience and education must be considered together, bearing an inseparable and necessary relation to one another (Dewey, 1998). Experience in this sense is more than the passive assimilation of a finished product. It must take something of what has come before and alter it in some way for those that will come after, Dewey’s sentiments are therefore very much aligned to Wesch’s aspirations of students as creators, rather than mere consumers of meaning (Dewey, 1998).

In order for this to occur the experience must give equal consideration to both the internal as well as objective external conditions, any normal experience being an interplay of these two fundamentals. While external factors control experience, the internal decides the type of experiences that may occur. One of the most significant disadvantages of traditional education is not its emphasis on the external conditions that shape and control the learning experience, but its disregard for internal factors and their baring on the types of experience that may occur (Dewey, 1998).
Synthesizing Experience through Storytelling

In traditional education the teacher is not drawn to interact with or become intimately acquainted with the conditions of the local community, be they physical, historical, economic, occupational etc. in order to exploit their educational potential (Dewey, 1998). Though there is no educational value in the abstract, this would certainly appear to be implied by the unbalanced approach embodied in traditional education systems, favouring those elements that can be controlled and uniformly distributed by the teacher. In turn we see arising from this process the notion that certain facts, subject matter and skills possess educational value in and of themselves. This is an assumption that has likely informed the focus within education on the dissemination of pre-digested material (Dewey, 1998).

Dewey’s findings echo many of the concepts surrounding multiliteracies outlined above in this regard and underline the degree to which they have become all the more acute in the contemporary era. Yet the principles and skills involved in the formation and communication of a story offer numerous opportunities for students and teachers to realign this imbalance. In the creation of a narrative response students are drawn to reshape, reassess and reconstruct their learning material in light of their own personal experience and background, to create numerous connections between the two. Their background may then inform their understanding of the learning material just as the learning material may offer new perspectives on students' personal experiences. As one informs the other so greater meaning with regard to both may be obtained by the student. Moreover, it is intuitively accepted that a student from an urban background will have an outlook that is in some degree differing to a student who has grown up in a rural area, similarly an only child may have alternative perspective to a student from a large family. Through the sharing, the exchange and discussion of such stories students may be challenged or enlightened by the alternative views of their peers or drawn to reflect more deeply on their own interpretation through questions ventured (Dewey, 1998).

In engaging the internal experience and background of the student, digital storytelling incorporates a diversity of perspectives into the learning environment. It thus has potential to address one of the most significant issues facing contemporary schooling, the increasing homogeneity of our education system. However, within the existing education system storytelling is currently limited to the function of acquiring the basic literacy skills of decoding words and the mastery of grammatical mechanics. Once such skills have been grasped storytelling is no longer considered
relevant to the students’ literary development (Banaszewksi, 2005). The educational potential of their alternate perspectives is therefore not engaged with.

Thus in shifting the focus of educational processes toward further acknowledgment of internal process and the student as an individual, digital storytelling creates greater union between external factors and the internal learning experience of the student. Ideally the external environment as a whole should acknowledge these internal aspects and thus be determined in such a manner as to interact in the best possible way with the capacities of the students, creating a responsive and worthwhile learning experience. However, the absence of mutual interaction between the external and internal means that this is a situation which is unlikely to occur. Thus, where learning does happen this is in many ways accidental. Whereas the objective external conditions may well suit some students who go on to have a positive learning experience, others must simply do the best they can (Dewey, 1998).

The Expressive Potential of the Digital

While the process of storytelling in itself greatly addresses this issue through engagement with the individual student’s background and internal experience, the capabilities of digital storytelling offer a number of particularly applicable opportunities for facilitating an effective interaction between such internal experience and the external processes of learning. Dewey notes that the responsibility of an educator is to utilise that which is most worthwhile in terms of offering students the potential for beneficial experience and growth. While the interaction between the students’ internal experience and the learning material facilitated by storytelling address this to a great extent, the variety of creative opportunities offered through the utilization of digital tools such as cameras, drawing applications, audio recording equipment and editing software significantly broadens the options in this regard (Dewey, 1998).

Offering students the tools and processes to actively connect learning material to their lived experience is also highly pertinent in enhancing the meaning of such material and its potential to inform student’s ongoing development. The knowledge and skills they have acquired become an instrument for future understanding through which subsequent situations can be effectively dealt with. While material passively accumulated may be recalled with relative effectiveness by many under the familiar circumstances of the exam hall, most will have experience with the phenomenon whereby such information is quickly forgotten following assessment.
This is largely due to the fact that information passively absorbed in isolation, without effective synthesis with our internal experience is easily forgotten once the conditions under which it was initially encountered have been removed (Dewey, 1998). As such, the failure to interact with the internal experience of the student and to adapt learning materials to their capabilities may be as detrimental to the educational potential of the learning experience and hence the continuity of this process, as a failure of the student to adapt to the material. Under such circumstance the learning material becomes segregated and disconnected from the rest of the student’s experience, it is thus unavailable to the student under the actual conditions of life. Calling to mind such information at a later date under circumstances vastly different to that of the classroom or examination environment in which it was acquired will prove extremely challenging (Dewey, 1998).

The potential for the material to expand and inform the future experience of students is therefore greatly inhibited. In offering numerous possibilities for creative expression digital storytelling facilitates greater interaction with the conditions of the student’s actual experience thus enhancing the potential of the learning material to inform their ongoing development. Added to this as has been noted above digital storytelling allows students to explore academic content in their own language. Thus the familiar and accessible conditions of the digital environment will likely assist in this process of meaningful assimilation.

**Learning in the Present**

The shortcomings of traditional education with regard to informing students’ ongoing experience is somewhat ironic when we consider that these are systems highly focused on the future and adequately preparing students for this. Yet here problems arise in that frequently the conception of this future is to a large extent focused on a final exam, with little meaningful consideration of student development beyond this.

A particularly relevant disparity in this regard between the traditional teaching approach and that employed by digital storytelling is a departure from a tendency to sacrifice the quality of experience in the present in favour of preparation for the future. While perhaps effective in the particular circumstance of curricula such as the Leaving Certificate, we always live in the present and it is only by extracting the greatest possible meaning from the moment in which we are living that we can prepare ourselves to do so in the future (Dewey, 1998). Thus lively and successful class discussion, in engaging students and drawing them to connect the learning material to their own experience is considerably more likely to inform future
understanding. In this way it endows the material with greater meaning and as such more effectively prepares students to participate in society.

Similarly digital storytelling provides ample opportunity for interaction and thus a more stimulating and engaging experience for students. Through presentations learners can interact with the alternative learning experiences of their fellow students, allowing peer review and feedback. In this way they may begin to understand fellow students as an important source of critique and inspiration. This process of sharing and review may assist in the development of students’ maturity, as they move from a position of simply wanting to tell a story to perceiving how the audience understand and interact with it (Ohler, 2008). Students may also be drawn to cooperate, combine skills and learning experiences through group digital storytelling projects. Students may therefore be drawn to collaborate and learn from one another rather than pursue an attitude of unhealthy competition.

In this way digital storytelling can be seen to create a meaningful connection between students’ internal and external learning processes, thus improving their educational experience as a whole. While as has been discussed, this has a significant bearing on the quality of meaning discerned by students, the processes of digital storytelling may also present potential benefits for student experience through the facilitation of a greater degree of clarity for learners in regard to their learning material. Storytelling is an important tool for organising and making sense of the world around us, as such it offers great potential for instilling a deeper sense of understanding in relation to learning material.

At the heart of most stories lies the desire to resolve conflict. In a similar way for the educational theorist Kieran Egan lesson plans are best understood in terms of binary opposites (Egan, 1989b). This process would seek to consider and resolve the various conflicts within Macbeth. In light of Egan’s theories a narrative consideration seeking to discuss and resolve ideas and concepts raised throughout may afford students a more holistic understanding of the play.

**Conclusion**

Creating an education system that prepares learners to function in our society as well as to realise the full potential of their own abilities requires nothing short of a complete revaluation of what it means to be knowledgeable, to be literate, to teach and to learn. While previously valued skills such as information retention and reproduction are continually undermined by technological advances and the subsequent ubiquity of information, others including problem solving, critical thinking and collaboration are becoming increasingly valued.
Whereas traditional teaching approaches were based on the presumption of permanence, stability and standardisation, contemporary education systems must seek to prepare learners for a world of transience, variety and change. Certainly this presents extreme challenges not only for educators, but for society as a whole. As such, the meaningful reform demanded of and aspired to by educators will be achieved not through small and steady concessions, but through an entire reimagining of educational paradigms.

In the event of such a reimagining, the addition of technology could offer a multitude of creative possibilities to assist in new approaches to learning. However while initially this research may have sought to identify a defined technological intervention capable of rectifying the disparity between education and wider cultural experience, findings thus far have underlined the inadequacy of such a delineated approach. Although innovative and engaging to a degree, applications such as *A Conversation With Sir Ian McKellen and Shakespeare in Bits* are remiss in that they fail to appropriately address the fundamental challenges posed to traditional learning approaches by technological developments and subsequent cultural change. Rather they perpetuate these largely passive learning processes, albeit while utilising the more dynamic capabilities of the digital medium.

It is thus the view of this researcher that meaningful change is more appropriately embodied in activities such as digital storytelling, whereby learners are drawn to recognize and emulate a range of vernacular creative skills including literary, visual, and oral communication, remediating these to the digital environment (Burgess, 2009). While facilitating experimentation through a variety of modes of expression as well as allowing students to create a sense of order in relation to their studies, in a sense these processes have the effect of permitting learners to explore and express academic content through their own language (Ohler, 2008). The potential variety this offers in terms of engagement and expression creates greater possibilities for learners to adapt learning material to their personal experience and internal learning processes. In this way the academic content becomes not alone more meaningful to the individual student, but more resonant for the group in a general sense. As learners are exposed to a variety of perspectives and expressions, their own attitudes are challenged. They are thus drawn not only to reflect on their own interpretations, but to consider and assimilate those of others, stimulating many of the aspired to activities and attributes mentioned above, such as collaboration, problem solving, creativity and analysis.

As such, in this chapter the researcher has sought to consider and explore the role of technological intervention in the context of a possible, reformed learning
environment. In this way the study seeks to depart from the limitations of traditional educational structures and thus meaningfully address the previously stated research objective of rectifying the disjuncture between formal learning contexts and contemporary perceptions and expectations of narrative. At the same time it strives to contribute to the broader question of how a learning environment that more appropriately prepares students to function in contemporary society, as well as to realise the full potential of their individual abilities might be achieved.
Chapter Three: Methodology

Introduction
A number of recurring themes arose during the review of literature, inviting further investigation regarding the disparity between formal learning contexts and contemporary expectations and perceptions of narrative. As previously noted this research will examine the study of Shakespeare’s *Macbeth* in order to explore this concept, together with the possibility of utilising digital media itself to address this imbalance. In order to conceive a relevant, effective and practical intervention to this issue, it was necessary to ascertain a comprehensive insight into the everyday classroom experience. As such this research sought to acquire a detailed and authentic understanding of the experiences of both teachers and students engaged in the study of *Macbeth* in the Irish Leaving Certificate curriculum. Progressing from the insights achieved at this stage the research considered an exploratory study into the possible significance of digital storytelling to the specific questions concerning this research. Does digital storytelling have the potential to enhance engagement with *Macbeth* in the Irish Leaving Cert context and thus extend its meaning for students? If so how might such an activity manifest? In this chapter the methodological approach undertaken to achieve this will be outlined and discussed.

This chapter will begin with a description and deliberation of the research approach and chosen research strategy. Due consideration will then be given to the concept of triangulation, with a subsequent outline and discussion of the research instruments employed. This will then be followed by a detailed account of the process of sampling and methods of data collection, with the lengthy task of data entry and analysis being then highlighted. The latter part of the chapter recounts the ethical issues encountered throughout the research journey, with the final stage considering the limitations and delimitations of the study.

Research Questions
As outlined in the literature review this research seeks to explore the relationship between narrative and human comprehension, the implications of media forms for this and how these inform educational paradigms. In this way it seeks to extend the principles of creative and analytical engagement, exploring the potential of digital media to rectify the disjunction between formal learning contexts and contemporary perceptions and expectations of narrative. This is not a fixed hypothesis, rather it is an idea that the research will seek to develop. In this way the process adopted is
influenced by the work of Jean McNiff into Action Research. The study will thus seek to explore and progress this concept by examining the case of Shakespeare’s *Macbeth* as an example of the complex relationship between digital culture and education. This research seeks to comprehend the place of *Macbeth* in the Irish Leaving Certificate Curriculum. To obtain such an insight the following questions will be under investigation:

- What is the classroom experience of *Macbeth* for both teachers and students?
- How do students respond to this?
- What challenges does this present for teachers?
- What are student and teacher perceptions of *Macbeth* as a work?
- Does digital storytelling have the potential to enhance engagement with *Macbeth* in the Irish Leaving Cert context and thus extend its meaning for students?
- If so how might such an activity manifest?

**The Research Approach - Qualitative**

Qualitative research is probably best characterized by the fact that there is no single method. The diversity of methods and approaches included under the banner of qualitative research has led to the conception of an equally disparate array of definitions. Typically involving interviews and/or observations of people in their natural and social context, Marilyn Lichtman describes qualitative research as, “a way of knowing in which the researcher gathers, organizes and interprets information obtained from humans, using his or her eyes and ears as filters” (Lichtman, 2012, p. 7). As such qualitative research allows for a flexible and intuitive approach whereby the methods used are defined by their appropriateness to the research questions.

As a research strategy it is strongly aligned towards the investigation of everyday events and/or an everyday knowledge of participants. Action processes are examined in their routine environment. As such qualitative research at all stages is bound to a large extent to the notion of contextuality. While the collection of data is generally carried out in the natural context, so too are statements considered and analysed in relation to an extended answer or general narrative, the total course of an interview, even the biography of the participant. As such qualitative research strives to consider all factors at play, examining the implications of complex
relationships, rather than seeking to explain single ‘cause and effect’ relationships in isolation (Flick et al., 2004).

Qualitative methods are grounded in the principles of Constructivism. As such they acknowledge the subjectivity of those under investigation and the research process itself as a subjective exercise. Even the reflective capacity of the researcher is taken into account as an essential part of the research process. Acknowledging the various and disparate nature of constructed realities necessitates that multiple perspectives must be sought in order to move closer to authentic interpretation. It is through the comparison and juxtaposition of diverse, frequently conflicting perspectives, that insight may be obtained and ideas previously held may be challenged (Flick et al., 2004). The freedom required to consider such a broad array of relationships and perspectives necessitates a policy of openness in qualitative research. Questions are flexible in formulation, while observations are carried out in an open fashion, rather than rigidly structured according to an observational grid (Flick et al., 2004).

This affinity between qualitative research and the constructivist paradigm greatly informed its choice as the methodological approach for this research. The concept of understanding the complex world of lived experience through the subjective viewpoints of those that live in it, was felt to be intrinsic to the objectives of the research. As Ferrarotti notes, social abstractions like ‘education’ are best understood through the experiences of the individuals whose work and lives are the stuff upon which such abstractions are built (Ferrarotti, 1981). A qualitative approach was thus essential for comprehension of the educational experience of Macbeth, the motivations that might underlie this and crucially the implications of these.

While such an approach has been deemed the most appropriate in the case of this research it must be noted that there is a strong tradition of quantitative analysis in educational research. The preference until recently for a broadly quantitative approach has been linked with a move within academia to align educational research with models favoured in the physical and natural sciences (Seidman, 2012). In many cases this approach to educational research may prove entirely appropriate, and indeed has garnered many positive and enlightening insights. However in the case of this research the decision to adopt a qualitative approach has been strongly informed by the nature of the questions under investigation.

In seeking an insight into what it is like for students and teachers studying Macbeth, what their experience is and what meaning they make of it, the research
does not seek to test hypotheses, to examine arrant cause and effect or gather statistics. Rather it seeks to explore the nature of process and comprehend experience. As such it must acknowledge that unlike the subjects of physical and natural science, these participants possess the capacity to think, feel and reflect (Bertaux, 1981). In the case of this research to neglect these attributes would be to render the process itself utterly futile.

The Research Strategy (The Case Study)
The objective of the research in seeking an insight into the experience of both teachers and students engaged in the study of Macbeth, necessitated the utilisation of a method devised for the study of process in action. Defined by Nisbit and Watt as “a specific instance that is frequently designed to illustrate a more general principle,” the case study provides an example of real people in real situations (Nisbet and Watt, 1984, p. 79). Case studies consider the whole to be more than the sum of its parts. As such they recognize the complete instance of human systems as they operate in context, as well as the individual and relationships therein. Perhaps the most definitive characteristic of the case study is that those under examination are set in temporal, institutional, geographical or other contexts around which a boundary can be drawn. Whether defined by context, with reference to particular characteristics or roles of participants the case study will strive to portray what it is like to be in a certain situation (Cohen et al., 2003).

As a method it is notably concerned with a rich description of events as they occur, providing a chronological narrative of proceedings relevant to the case. This description is typically combined with analysis as the researcher investigates various actors and groups of actors in an attempt to comprehend their perception of the case. As such case studies can provide powerfully revealing and descriptive data (Cohen et al., 2003).

Although it is possible to conduct a quantitative case study, this method most commonly lends itself to a qualitative approach. As with most such methods the case study is vulnerable to bias. Typically connotative in nature the risk of bias entering the research through self-reporting by researcher or participant is ever-present. This issue is of particular pertinence where research is reliant upon memory. Added to this the research is by its nature a selective process. Upon completion only the researcher is party to what information has been included and what has been omitted. The combination of knowledge and inference typically a feature of case studies further complicates such issues as discerning one from the
other can be difficult (Dyer, 1995). It is thus imperative that the researcher remain
cognisant of this, at all stages maintaining clarity with regard to which is which.

The objective of this research in seeking to gain an insight into the experience of teachers and students engaged in the study of Macbeth is in itself a case study. As discussed in the literature review, through seeking such an insight this research aspires to examine the broader hypothesis of the relationship between education and the changing media landscape. In this regard the selection of the case study approach has its basis in a desire to explore and address such questions in an authentic and practical manner, rooted in genuine classroom experience, interaction and process.

This preference for a foundational knowledge of real-life experience made the case study an ideal method for the investigation of such concepts. Considering the relevance of context to this research previously discussed, the acknowledgement of context as a determining factor, was of particular interest. As such the case study was selected for this research as the most appropriate and feasible method for ascertaining an authentic understanding of the experiences in question.

**Triangulation**

Triangulation is defined by Cohen et al. as “the use of two or more methods of data collection in the study of some aspect of human behaviour” (Cohen et al., 2003, p. 141). In doing so it seeks to develop a deeper insight into human behaviour in all its richness and complexity, through examination from multiple viewpoints. This process is grounded in the concept that while single method research may yield revealing results in the natural sciences for example, such an approach is unlikely to offer a rounded insight into complex human interactions (Cohen et al., 2003).

Triangulation is particularly relevant in qualitative research where, as has been earlier noted information is gathered by the researcher “using his or her eyes and ears as filters” (Lichtman, 2012, p. 7). Considering the subjectivity inherent in qualitative research, reliance on a single method could leave the research vulnerable to bias. Through the use of multiple methods the researcher’s perspective is less likely to be distorted by a singular view of the reality under exploration. While offering a more diverse insight into the various issues at play triangulation can also instil confidence that findings are not merely isolated artefacts. Instead findings of multiple methods can reveal connections, comparisons as well as contrasts (Lin, 1976).
Undeniably triangulation represents a significant increase to the time and investment required. However in the case of this research triangulation was deemed essential in seeking an authentic and enlightened response to the questions under investigation. At the heart of this decision is the constructivist paradigm and qualitative approach, as undoubtedly acknowledgment of the diverse and contrasting nature of constructed realities could not be achieved through the adoption of a single method. An added factor in this instance, are the levels of analysis under investigation. For while this research seeks to explore the perspectives of both teachers and students, of equal relevance are the interactions of the class group as well as the education system itself. The levels of analysis are thus threefold encompassing the individual, the group and the society. Considering this a single method approach could not suffice.

**Sampling**

As Creswell notes one of the primary characteristics embedded in the principles of qualitative research is the selection of participants most suited to ascertaining an understanding of the research agenda (2013). In contrast to approaches advocated by quantitative methods, this is not necessarily achieved through a random or large sample of participants. Indeed embodied in such an approach is the suggestion that people are essentially interchangeable, an assumption that is virtually antithetical to the values of this research, as outlined above (Palys, 2008).

As such the sample of participants involved in this study has been selected purposively. Purposive sampling is a form of non-probability sampling in which participants are selected based on the judgement of the researcher. The main goal of purposive sampling is to focus on the specific characteristics of a population that are of interest and will thus best elucidate answers to the research question (‘Purposive Sampling,’ 2012). Purposive samples are typically small in size, a feature that has been reflected on this occasion.

In the case of the observation and interview stages the sample has been purposively selected due to the engagement of the participants as both teachers and students in the study of Shakespeare’s *Macbeth* at Leaving Certificate level. During their participation in the study students were engaged in their fifth year of second level schooling and hence the first year of their senior cycle curriculum. Students ranged in age from 15-18 years old and all were studying the higher level English curriculum. As such this was their first meeting with *Macbeth*. These students displayed a range of attitudes to *Macbeth* which will be discussed in Chapter Four.
While the participating students at observation and interview stages were selected in order to ascertain an insight into students’ experience and perception of *Macbeth* as presented in the existing Leaving Certificate curriculum, the workshop sought to investigate the potential of the alternative approach of digital storytelling. Although conducted in the same school as the observation and interview stages, at this stage the purposive sample consisted of a group of fifteen transition year students. As this group had not yet entered senior cycle they had not encountered *Macbeth*, although they had studied Shakespeare’s *Romeo and Juliette* as part of their Junior Cycle syllabus. These students ranged in age from 15-17 years old. At this stage in their schooling the students were not streamed into higher or ordinary level English.

At all stages these groups can more specifically be described as a critical purposive sample. As such the insights obtained during this research will be used to ascertain whether this is a phenomenon worthy of further investigation. Therefore while it is not the goal of this research to make statistical generalisations in relation to student experiences of *Macbeth* and the implications of this for realigning formal learning contexts to contemporary perceptions and expectations of narrative, it will seek to obtain a series of carefully considered, logical inferences, which may inform the shape and possible direction of further research in this area, should this be deemed viable (‘Purposive Sampling,’ 2012).

**Microethnography**

This strategy is also inspired to a certain extent by the principles of microethnography. Microethnography seeks to address large social and organisational issues through the observation and analysis of small moments of human activity and interaction. It is typically concerned with the understanding of process in action, with human interaction and activity being observed naturally as they occur within specific contexts or institutions. As such microethnography facilitates a detailed perspective of such processes, how these are moulded and informed as they merge and diverge with the sociocultural landscape and the manner in which they in turn reshape this landscape.

The educational researcher and anthropologist George Spindler described the principles underlying this approach in the statement, “The smallest part of the whole seems to reflect the whole, if we know how to read it” (McDermott and Erickson, 2000, p. 11). Microethnography has featured significantly in educational research for a number of decades. Frederick Erickson and Ray McDermott were early proponents of this approach, with much of their work regarding the study of
language and social interaction within educational settings\textsuperscript{11} embodying a number of microethnographic characteristics (Trueba and Wright, 1981).

The particular interest of microethnography in examining the implications of participant communication and interaction, as well as context for the process of meaning making, are much aligned with the objectives of this study. In this way it has informed to a certain degree the decision to adopt a detailed and focused process of data collection and analysis with the purpose of formulating insights. The analysis though modest in scale will therefore seek to identify a number of areas for more rigorous and extensive investigation.

**The Research Instruments**

**Participant Observation**

A variety of data collection techniques were considered, however the nature of the research question led to the selection of participant observation as an essential, initial line of investigation. Participant observation is an ethnographic technique whereby data is collected through observation of common and uncommon activities in their natural setting (DeWalt and DeWalt, 2011).

This form of data collection can involve varying degrees of participation on the part of the researcher. In the first instance of classroom observation this research will employ a non-participatory approach. The primary reason for this is to preserve the integrity of daily classroom interactions and activities to the greatest possible extent. While this is essential in order to obtain the most authentic understanding of life in the classroom possible and thus the experience of teachers and students engaging with *Macbeth* in the context of the Leaving Certificate curriculum, it is also necessary so as to avoid disruption to the work of these participants.

In the second instance this research will involve the facilitation of a digital storytelling workshop. This stage of the research will combine participatory and non-participatory elements. The workshop itself will be delivered and facilitated by the principal researcher, therefore its very conveyance will necessitate intervention on their part; this is by its nature a participatory role. While serving to facilitate the workshop the principal researcher will make a series of observations regarding the interactions and responses of students.

\textsuperscript{11} Microethnographers McDermott and Erickson utilised videotape to minutely analyse interaction patterns in counselling sessions and elementary school reading groups (Donmoyer, 2010).
Yet this process will also be informed and tempered by the non-participatory observations of a research assistant. While the role of the principal researcher necessitates intervention, as in the earlier stages of this research, the assistant will seek to preserve the natural flow of the classroom environment by maintaining a passive and unobtrusive presence.

**Advantages**

Participant observation was selected due to a variety of factors. It was felt that observing classroom activities was essential in order to obtain a nuanced understanding of context. While alternative methods of data collection yield important and revealing results, it is possible that intrinsic matters taken for granted by the participant may fail to present themselves. During participant observation, insight is gleaned not only from what the subject says, but from their behaviour, meaning these implicit matters are more likely to be revealed (Mack, 2005). As such it was felt that there could be no substitute for witnessing activities and interactions first hand.

Moreover this process is inherently less reactive than other forms of data collection. Unlike surveys and interviews which are dependent on verbal or written responses to defined questions, the researcher’s objective does not shape the trajectory from the outset. This more passive role inhabited by the researcher during observation may mitigate opportunities for bias to enter into the work. Similarly it diminishes the possibility of misreporting on the part of the participant. Whereas in other forms of data collection participants may be drawn to please the researcher or present themselves in a favourable light, this is less of an issue in participant observation (Cohen et al., 2003).

Another key advantage is the revelation of important factors, which may have been unknown at the study’s design stage. As has been noted by Bernard, regardless of the verity of responses provided by the participant, the achievement of a comprehensive understanding of the issues at play may be hampered by a failure on the part of the researcher to ask the right questions (Bernard, 2006). As such participant observation was deemed particularly appropriate as the preliminary phase of data collection. In this way information revealed at this stage could be used to inform questions at the interview and questionnaire stages, encompassing issues perhaps unforeseen at the outset of the study.

Initiating the research in this way also had the benefit of facilitating the formation of positive relationships with valuable participants, stake holders and gate keepers whose involvement would be vital to the research. Involvement at the
observation stage would facilitate introduction to the research with a minimal level of effort or commitment. They could then be invited to participate in subsequent stages of research having gained a familiarity with the objectives and the researcher themselves.

**Disadvantages**

Yet as with all forms of data collection, there are a number of disadvantages associated with participant observation. One such disadvantage is the time consuming nature of the process. In order to obtain a truthful picture of the relevant interactions and activities it is necessary to observe them in context over numerous sessions. Adler and Adler noted that this process should continue until such time as ‘theoretical saturation’ has been reached i.e. when it appears that data obtained during observation sessions has begun to repeat itself (2011). Naturally this process accumulates to many hours of data collection. This theme continues to the analytical stage, which is notably protracted in nature. Information recorded during observation sessions including factors such as appearance, verbal interaction, physical gestures, personal space etc. can result in a mass of data, which must be analysed in order to discern meaning.

The issue of bias, must also be considered during participant observation. While this is true of all forms of data collection, it is of particular relevance to participant observation as this is in itself an inherently subjective exercise. The observer must consciously strive to maintain their objectivity (Mack, 2005).

While it has been noted above that participant observation is inherently less reactive than other forms of data collection, it must be recognised that the mere presence of the observer may have some reactive effects. It is possible that the very knowledge that they are being observed may lead participants to behave and interact differently. Commonly referred to as the ‘Hawthorne Effect’, improved or modified behaviour among participants is a significant concern associated with such methods (Macefield, 2007). While many participant observers find that their presence is neutralised over time, researchers must be conscious of this effect throughout the observation process (Bryman, 2015).

With this in mind every effort will be made to preserve the natural rhythm of the classroom session during the first stage of this research. Similarly during the digital storytelling workshop the role of the research assistant is to silently observe the environment and proceedings. Equipment in both cases will be limited to pen and paper. Despite this it should be acknowledged that the participants’ awareness of the observation may disturb their natural patterns of behaviour.
When compared with the character of the interview encounter for example, participant observation provides a more natural insight into the experience and behaviour of the subject, as informed by context. It is believed that these sessions combined with the subsequent investigative procedures will provide an in depth understanding of how *Macbeth* is taught, as well as the potential of digital media as an intervention into this process.

**Interview (Semi-structured)**

This stage of investigation will be conducted following the first stage of classroom observation. It will thus consider knowledge obtained during the classroom observation for further investigation and elaboration. While the observation sessions themselves will seek to provide a comprehensive insight into how things are, depicting a detailed and expansive reflection of classroom activity and interaction during the study of *Macbeth*, further probing will be required in order to illicit why they were thus. The interview was thought to be the most appropriate and effective method for developing such an understanding.

Considering the nature of the research question it was felt that acknowledgment of the participants’ stories was both apt and essential in order to obtain a meaningful understanding with regard to the perspectives of both students and teachers. As noted in the literature review stories are an important process of meaning-making. In recounting, a story the teller is drawn to reflect on details which are of particular relevance to them.

While potentially eliciting significant insight, establishing dialogue with those who are equally interested in the process of learning is the most effective approach in the construction of new knowledge (McNiff, 2012). In the view of this researcher this is best achieved through the dialogue of equals established during a successful interview. As such it was felt that the interview would offer an important insight into the meaning both teachers and students make of their experience in the classroom (Seidman, 2012).

While offering a potentially highly informative means of inquiry, this process of drawing subjects to reflect on their experience represents a significant intervention into the classroom experience and approach to the play. As such this was also a decisive factor in informing the decision to conduct participant observation sessions prior to interviews. In this way the initial view elicited of classroom life would be to a large extent unencumbered by external influence and thus as authentic an insight as possible.
With such objectives in mind the semi-structured interview was deemed the most appropriate format. In order for the interviewee to disclose their subjective understanding they would likely require the provision of adequate space and flexibility to tell their own story, to reveal what is relevant and important to them. As such a degree of digression would be necessary (Bryman, 2015).

The semi-structured interview whereby the researcher prepares a number of pre-defined questions, but is free to modify these in response to what is deemed appropriate for a particular participant, offered the flexibility required to facilitate this. The participant is guided by the researcher, but is permitted to develop ideas and speak more widely on particular issues that may present themselves (Denscombe, 2010). The freedom of this approach offers the potential to obtain the interviewee’s subjective understanding, so intrinsic to the development of the research.

Advantages
The malleable and adaptable nature of the interview is one of the most pertinent advantages of this form of data collection. The researcher is free to follow-up on ideas previously mentioned, to question more deeply, investigating emotions and motivations or to draw the participant to elaborate. In this way they can focus the interviewee where appropriate, while allowing them the freedom to develop their own ideas, opinions and contributions (Bell, 2006).

Through this process of extended interaction the researcher can build up a rapport with the interviewee, fostering an atmosphere of trust and openness that will draw them to offer detailed and uninhibited reflections. The researcher may begin to infer meaning not only from verbal responses, but facial expressions, tonal inflections, pauses and non-verbal cues etc. Unlike a questionnaire, responses may be clarified and developed. Moreover it is likely that almost all questions will at least be attempted by the interviewee. These elements combine to give a greater depth to the interview experience than to many other forms of data collection (Sarantakos, 2012).

Disadvantages
Yet as with participant observation, semi-structured interviews also present a number of disadvantages. The process itself is undeniably time consuming at all stages. While conducting the interviews themselves may run to hours in duration, a considerable amount of time must also be allowed at the outset in order to initialise the interview process (Seidman, 2012). While in this case contact will have been established during the participant observation stage, coordinating a suitable venue,
a time generating the least possible inconvenience, ensuring the interviewee is appropriately informed with regards to the process and negotiating gate-keepers, all take time. The analytical process is again notably lengthy, with time required to transcribe interviews running far in excess of the sessions themselves. Robson has noted that an interview one hour in duration can take as long as ten hours to transcribe (Robson and McCartan, 2002). Considering the rather substantial group of fifteen students and four teachers, the interviews would represent an extensive commitment of labour and time.

The issue of bias must also be considered throughout the interview process. This is true not only when considering responses at the analytical stage, but from the very early stages of question design. As researchers are subjective and imperfect human beings it is necessary to acknowledge that truly dispassionate research may not be possible, yet this underlines the necessity for vigilance at all stages throughout the process (Bell, 2006). Indeed the very notion of the interview as a process whereby participants are subjects whose words can be appropriated for the benefit of the researcher raises a number of ethical issues which will be addressed in greater detail later in this chapter (Seidman, 2012). Moreover while bias is an issue with regard to the researcher themselves, as noted above cases can similarly arise where participants may seek to please the researcher or present themselves in a more favourable light, thus skewing the data.

The success of the interview is very much dependent on the demeanour of the interviewer as well as the atmosphere throughout the session. If a venue is selected that is in some way uncomfortable or uninviting to the participant, if the interviewer appears nervous, awkward or unfriendly, it is unlikely that the participant will be forthcoming. If the participant cannot converse freely and naturally with the interviewer it is doubtful that a detailed insight into their subjective understanding will be gleaned (Hopf, 2004). It is thus crucial that the interviewer remains cognisant of these factors, considering how the participant should be addressed and where they might be most comfortable. In the case of this research for example these factors require adjustment depending on whether the participant is a teacher or a student. The researcher is compelled to respond to the needs of each participant in order to establish a rapport.

**Questionnaire**

While the semi-structured interview has been selected as the most appropriate instrument for the consideration of knowledge obtained during the first stage of classroom observation, insights obtained during the digital storytelling workshop will
be explored and augmented with the aid of questionnaire responses. While the participant observation conducted during the workshop itself will seek to ascertain an understanding of student engagement and interaction, it is of equal importance that an insight into students’ thoughts and opinions regarding their experience is obtained. In order to effectively achieve this it is necessary that such an insight be determined as quickly as possible in order to avoid a situation where participants are unable to clearly recall the events of the session.

Advantages
While it was felt that interviews would be the most appropriate means of acquiring such information during the earlier stages of this research, the organisation and facilitation of these sessions would demand a significant amount of time, therefore the possibility of a questionnaire was considered. While questionnaires could be distributed in the immediate aftermath of the session, this form of research instrument would also allow respondents to contribute experiences and thoughts in an in-depth manner. Thus while addressing the issues in regard to time, the questionnaire will permit a detailed insight into student attitudes to their workshop experience. Questionnaires are also favourable in that they provided anonymity, allowing for potentially more truthful responses (Robson and McCartan, 2002). This is particularly relevant in this instance, considering that the workshop will be facilitated by the principal researcher. As such, in interview scenarios students may feel obligated to offer more favourable feedback in relation to the workshop.

Disadvantages
Clearly the questionnaire presents some disadvantages. Unlike interview sessions, questions are limited to those designed in advance. In light of the researcher’s absence, the questionnaire does not allow for further probing or clarification of issues that may arise during the course of completion (Sarantakos, 2012). Added to this are issues concerning incompletion, as well as a risk that responses may be informed by what Robson terms ‘the social desirability response bias’ whereby participants feel compelled to present themselves in a more favourable light (Robson and McCartan, 2002). While certainly an acknowledged concern these challenges were weighed as acceptable when considered against the various advantages and the particular significance of time.
Questionnaire Design

The absence of face-to-face contact at this stage emphasises the importance of communication and hence clarity in regard to the questionnaire’s design, necessitating a careful and considered approach. As such due diligence will be employed to ensure the survey queries reflect and interrogate issues at the heart of the broader research questions. Maintaining such clarity is of particular pertinence considering the younger demographic of participants; therefore significant care will be taken in regard to linguistic and visual communication (Cohen et al., 2003).

As is the case with this research as a whole, the questionnaire will embody a qualitative approach. Therefore an open ended style of question will be employed. This form of questioning is necessary in order to fulfil the requirements of the research agenda. The freedom of expression this facilitates allows respondents to provide a thorough insight into their experiences and thoughts with regard to the workshop. While allowing for such freedom it is necessary that questions focus the respondent in order to discourage rambling or divergent answers.

Entry and Analysis of Findings

The objectives of this research sought in the first instance to explore the experience of studying Macbeth at Leaving Cert level and in the second instance to examine the potential of digital storytelling as a learning intervention. Considering these intentions, any patterns or themes identified would likely be implicit in the data itself. In this way the theories that emerge could inform the main questions occupying this research.

In order to achieve this, the analysis of the data would be rooted in a grounded theory approach. Grounded theory starts with the data and moves towards theory. In this way data collection is not moulded by the investigation of a specific hypothesis, rather theories are allowed to emerge from the data itself. Examination of the data in this way will therefore allow for the emergence or discovery of patterns that can be coded. These codes can then be investigated and their links explored. Links between codes or categories of action and expression direct the researcher to examine these codes and categories in more detail. The researcher can then build from these codes or categories to more abstract concepts and conceptual models that best account for what is occurring on in the data (Glaser and Strauss, 2009).

The grounded theory methodology is particularly apt given the importance of context to the research. In light of this it was felt that allowing the data to speak for itself as it were would not be sufficient. Rather acknowledgement of the
interconnected nature of the classroom experience is imperative to meaningful analysis of findings. Life does not occur in a vacuum therefore every effort was made to authentically represent the natural complexity of relationships. As such each finding will be considered in relation to apparent inconsistencies, contradictions and discontinuities (Cohen et al., 2003).

This approach is of particular significance given the relevance of the relationship between theory, perspectives and practical application to the research questions. Therefore an emphasis would be placed on the connections between data. This approach is particularly aligned with the concept of constant comparison inherent in the grounded theory approach. Constant comparison refers to the fact that grounded theorists commence their analysis of data from the outset of the data collection process. Thus this method compels the researcher to compare units of data asking what makes one case or unit different from the next. Each round of data collected should be reflected upon and such reflections should force the researcher to clarify their tentative theories in relation to previous data and theories that emerged from them (Glaser and Strauss, 2009).

A cross-instrument approach would thus be employed at both the first and second stages of the research in order to emphasise these connections. As such observation and interview findings would be scrutinised alongside one another. In a similar manner workshop observations and questionnaire responses would be jointly examined.

It is the view of this investigator that such a multi-variant, connected process, along with the nature of the research objectives would necessitate a holistic, story type method rather than a fragmented atomistic style of data analysis. In this way issues would be outlined as they emerged from the narrative of data analysis, thus embodying the exploration of narrative at the heart of this research. However, while appropriate this integrated method would necessitate particular regard in underlining what is record and what is interpretation (Cohen et al., 2003).

**Method**

**The Sample**

As previously noted all stages of this research were conducted in the same school environment. A number of factors contributed to the selection of this situation for the case study sample. The school is a large single-sex school (all girls) drawing its students from urban as well as rural primary schools. Like the vast majority of Irish schools it has a Catholic ethos, however it welcomes all denominations and backgrounds. In ethos, size and diversity of student populace it is typical of many
Irish secondary schools. Moreover the primary researcher had an existing relationship with the school staff. This inevitably facilitated the initiation of contact and meant that the school was more favourably disposed to participation in the research. This combined with the geographical proximity of the school to the home of the primary researcher allowed for greater access.

While the absence of male students in this primary group presents some obvious limitations, it must be noted that single-sex schools are common in the Irish education system, with 68% of secondary school students and 36% of all students in state supported second level education attending such institutions (‘Second Level Schools And Pupils By Type Of School, Year And Statistic’, n.d.). The decision to focus primarily on a small sample group is dealt with later in this chapter under Limitations and Delimitations.

As noted above, the participants involved in the interview and observation stages of this research consisted of four Leaving Certificate higher level English teachers and their students, all engaged in the study of Macbeth. The classes comprised 25, 27, 25 and 28 students. At the interview stage each of the teachers and fifteen of the students were selected to participate. While teachers agreed to engage in interviews at the outset of the study, students were invited to participate following the classroom observation sessions. Willing students were then selected by their teachers in order to reflect in so far as was possible the range of abilities (as denoted by the parameters of the Leaving Certificate) represented in the class group i.e. an equal representation of A/B, B/C, C/D and borderline students. This approach sought to obtain a rounded view of student attitudes and perceptions including those who prosper and those who struggle within the existing curriculum.

In contrast the workshop participants were unencumbered by any experience of the Leaving Certificate approach to Macbeth. This presented advantages in that students had no predefined perceptions of the play or how it should be experienced and were thus likely to adopt an open-minded approach to the workshop proceedings. This was perhaps augmented by the fact that as transition year students these participants were not bound to a rigid exam cycle. While this informed their selection in that their timetable was more flexible than that of students engaged in preparation for the Leaving Certificate and therefore more amenable to participation in the workshop, it also devised that these students were more accustomed to alternative learning approaches and activities. Inevitably this meant that students participating in the workshop would have a markedly different approach to those engaged in the observation and interview stages. This significant
differential was taken into consideration during the design, implementation and analysis of the workshop.

**Stage 1: Participant Observation**

Initial contact with the school was made via letter to the school principal. This first contact outlined the background of the primary researcher. It went on to explain the purpose of the research as well as the proposed method of investigation and the school’s possible involvement in the same. The school responded positively to this letter, contacting the primary researcher by phone in order to arrange a face-to-face meeting with the school’s principal. This meeting was conducted in the office of the school principal and involved further discussion of the purpose of the research, what this would entail and what implications this would have for both teachers and students. Upon the close of this meeting the school principal was satisfied with her comprehension of the research as well as the potential involvement of the school. In order to progress matters she provided the contact details for the head of the school’s English department.

Contact was duly made with the head of the English department via phone, who was subsequently briefed on the particulars of the research. It was explained that the classroom observations would be non-participatory and thus would not involve any intervention or disturbance of classroom activities. The subsequent interviews would involve each of the four teachers and fifteen of the students. The latter would be selected by their teachers, based on their willingness to participate and with a view to representing the different levels of ability in the class. At the close of this conversation the head of English was satisfied with the proposed schedule of research activities and expressed her confidence that the other teachers would be happy to participate.

Following this a meeting was arranged with all four English teachers engaged in the study of *Macbeth*. This meeting was carried out in the school’s staff room. Teachers had been briefed with regard to the research in advance of the meeting by the head of English. As such they had a fair understanding of what was involved and had a limited number of questions regarding the objectives of the research. Each was assured that the research would not interfere with their progress through the curriculum and that they were free to withdraw from the research at any stage, should they wish to do so. While one teacher appeared concerned that the research might be in some way an evaluation of her professional ability, further explanation of the research objectives appeared to alleviate these apprehensions and she consented to participate.
The observation sessions commenced the following week, each day alternating between the various class groups. In every case the researcher was briefly introduced to the class by the teacher, before the commencement of the first observation session. This involved the provision of the researcher’s name and an explanation that she would be observing classes over the coming weeks as part of PhD research into the study of *Macbeth*. At the outset of the first session the presence of the researcher did appear to be a minor distraction to some students, who would occasionally glance in the direction of the researcher. However by the end of these first sessions this appeared to have dissipated and subsequently the researcher’s presence was rarely acknowledged.

In all cases the researcher sat at the rear of the class and with the exception of the initial introduction by the teacher, did not communicate with students or engage in the class in any way. In order to remain as inconspicuous as possible the research equipment consisted merely of a notebook and pen. The researcher would then proceed to note all relevant aspects of the session, including class activities, the classroom environment, interactions between teacher and students as well as among the students themselves.

Following each session the handwritten observations of the researcher were typed and organized. For clarity and to insure the delineation of opinion and report, comments and inferences noted by the researcher during the session were separated from straightforward observation. In each case the former being placed alongside the relevant observation and highlighted in red. Observation sessions continued over a six week period, terminating in conjunction with the class’ study of *Macbeth*, as they moved on to a different area of the curriculum.

**Stage 2: Interviews**

Interviews were carried out with fifteen fifth year Leaving Certificate students and four English teachers, all engaged in the study of *Macbeth*. In each case interviews were conducted on a one to one basis. These were carried out on school grounds and were recorded digitally. In the case of student participants, said individuals were selected by their teachers based on their willingness and to reflect the range of abilities represented in the class. Two weeks prior to the dates arranged for the interviews, each potential participant was provided with an information sheet and consent form. In the case of student participants an additional information sheet and consent form was provided for their respective guardian(s). Given the minor status of the majority of students participating in the study, it was imperative that both they
and their guardian(s) were aware of the processes involved and their rights, while guaranteeing their confidentiality at all times throughout.

For the convenience of the participants and to ensure their relative ease, interviews were conducted in the familiar surroundings of the school premises. In the case of student participants the venue was chosen in advance by the school’s administrative staff. This was a small room, adjoining a regularly occupied common area. This venue proved entirely appropriate for the purposes of the interview. While providing a degree of privacy and acoustics conducive to the process, the proximity to the common area insured a level of supervision from the school’s staff. Due to the minor status of the participants and the fact that the researcher was not a member of school staff, the door to the interview venue was left open, to accommodate said supervision.

In the case of teacher participants the venue was selected by the teachers themselves in collaboration with the school’s administrative staff. This was a small room similar to that provided for the student interviews. This possessed the same attributes of acoustics and an environment conducive to the interview process. This room’s only relevant difference from the previous venue was that it was slightly more private. With supervision being less of an issue with teacher participants, this room was located in a quieter area of the school, further removed from general school activities.

Interviews were typically of between ten and fifteen minutes in the case of students and approximately twenty minutes in the case of teachers, with variations in duration typically dependent on the responsiveness of the participant. In an effort to avoid unnecessary disruption, the sessions were carried out during school hours. Specific times for student interviews were selected by school staff, at points throughout the day that were deemed most appropriate. Teacher participants selected their own session time.

Prior to the commencement of the interview the researcher introduced themselves to the participant. The researcher went on to explain the interview process, the approximate duration as well as its purpose. The notion of the interview process as a social, interpersonal encounter, rather than a mere data collection exercise, was important at all times (Cohen et al., 2003). This was particularly pertinent in the case of student participants due to their youth and frequent initial evasiveness. Every effort was thus made to ensure they were at ease.

All participants were assured that their anonymity would be guaranteed and in the case of students reminded that this was in no way an evaluation of their personal abilities. The latter was of particular importance as student participants
tended to assume that they were being tested in some way. Therefore every effort was made to alleviate any such misgivings. The interview then began in earnest with specific questions regarding the participant’s experience of Shakespeare. The aim was to guide the interviewee to revealing answers to questions such as these, while at the same time allowing room for them to express issues they felt were of particular relevance in relation to the topic. As such participants were given relative freedom to develop responses and raise related points, with verbal prompts or probes being utilised by the researcher where necessary to ensure the forward progression of the interview. The interview sessions came to a close with the researcher extending due courtesy to the interviewee for their time and participation.

In order to ensure the confidentiality of participants at no stage throughout the recording were they identified by name, but instead students were referred to as Student 1, Student 2, Student 3 and so on, with Teacher A, Teacher B etc. denoting teachers. At no point throughout the process did any participant appear deterred by the presence of the recording device. In many cases participants appeared somewhat reticent at the session’s outset, however with reassurance from the researcher this soon dissipated. While some were more forthcoming than others, none had difficulty expressing their views. Teachers were particularly open and indeed eager in sharing their opinions as the sessions progressed. Following the completion of the interviews, the recording of each session was transcribed verbatim.

Stage 3: Digital Storytelling Workshop

Context, Design and Structure

Computer Supported Collaborative Learning

The significance of collaborative learning has been discussed throughout the literature review. Others represent the most important mechanism for testing our own understanding as well as facilitating exposure to and examination of alternative viewpoints. Accordingly the design of the workshop strove to embody a collaborative focus. In this way it has been informed by many of the principles of Computer Supported Collaborative Learning (CSCL).

CSCL is essentially the study of how people can learn together with the help of computers. As such it challenges the notion of computers as inherently solitary and anti-social, proposing the development of new software offering creative activities, social interaction and intellectual inspiration in an effort to bring learners together. Rather than an established body of broadly accepted laboratory and
classroom practices, this is a vision of what may be possible and what types of research should be conducted. It therefore mirrors many of the objectives of this research in motivation, scale and form (Koschmann et al., 2005).

CSCL challenges the common yet naïve notion that the simple digitization of classroom content can make for compelling instruction (Koschmann et al., 2005). This is a misconception that can perhaps be recognised to a certain extent in a number of the digital learning applications discussed in the review of literature. Although tools such as *Globe Education Shakespeare: Macbeth Dynamic Learning* exploit the energetic potential of the digital to bring material to life through utilisation of multiple media forms including video and audio features, they are somewhat diminished by their limited consideration of how such features will augment group interaction and collaboration.

While these applications are primarily concerned with the isolated reaction of the student to the digital artefact, this study is informed by the contention of CSCL that more effective learning will occur through interventions that allow students to ask questions, to pursue lines of enquiry together, thus teaching one another and observing how their peers learn. Software is designed to support rather than replace these group processes. As such, the design of the workshop would require careful consideration of curriculum, pedagogy as well as technology (Koschmann et al., 2005).

While the contentions of CSCL regarding collaborative learning informed the aspirations of the workshop, they were also influential in regard to the process of inquiry. CSCL acknowledges that collaborative learning is composed of individual learning, but it is not reducible to it. Analysis at both group and individual level is thus necessary (Koschmann et al., 2005). The decision to combine classroom observation, with individual questionnaire responses was informed by this contention.

**SimRocket**

SimRocket, conducted by Gerry Stahl is a notable precedent for research in this area. SimRocket examined the creation of group knowledge among middle school students while interacting with a computer simulation of model rockets. The simulation presented students with seven model rockets, whose configuration would allow them to measure the effects of each rocket variable in order to predict the behaviour of an eighth rocket. The students were thus required to learn the structure of the list of rockets in order to take advantage of that structure and complete certain computational tasks (Stahl, 2004).
Stahl analysed a transcript of an intense half minute interaction between five students engaging with the simulator. Through dissection of the group’s conversation, verbalisation and social interaction Stahl concluded that prior to the collaborative moment the group were unable to see the structure of the SimRocket list of rocket characteristics, but that through their interaction they learned to see the new structure and in turn taught one another to see it. As such the group understanding that emerged surpassed the prior understanding of the individual participants, allowing them to derive scientific conclusions together (Stahl, 2006). By embedding meaning in the programme students were compelled to work together in order to arrive at a point of understanding. It therefore stimulated the students to collaborative learning through a process of construction and exploration.

**CSCL and Microethnography**

CSCL is influenced to a large degree by the principles of microethnography earlier discussed. It is therefore primarily concerned with the research of collaborative learning within small groups, with observations taking place over relatively short periods of interaction. Small groups are considered the most valuable in the study of collaborative meaning making as they allow the full range of social interactions to play out, but are not so large that either participants or researchers lose track of what is going on (Koschmann et al., 2005). In relation to the workshop this informed not only the size of the study, but as will be outlined later in the chapter, the decision to divide the group into a series of sub-groups for a large portion of the session.

However, small groups are not the only unit that should be considered, analysis of larger scale groups and communities should also be conducted in order to elucidate emergent social phenomenon (Koschmann et al., 2005). As such, this workshop and the case of digital storytelling should be considered in the context of the curriculum and the values of the education system as a whole. Added to this, such an approach informs the contention that the findings of this study will determine the potential for further research, as well as informing its shape and direction, should such continuation be deemed viable.

**Filmmaking in Education**

While Stahl’s SimRocket study strove primarily to assess the collaborative potential of technology in the role of stimulating group interaction and discussion towards the comprehension of a learning objective, this workshop will seek to extend this exploration to the process of collaborative creation. This aspect of the workshop is largely influenced by the contentions of Dewey that in order for learning to
meaningfully inform the experience of the student, the process must alter the
learning material in some way for those that come after (Dewey, 1998). Yet it is also
vital to one of the central tenants of this research, preparing students for full
participation in society. While traditional educational approaches of assimilation are
grounded to a large extent in a culture that assumed the future would remain
broadly similar to the past, contemporary students must learn to function in a society
where change is the rule, not the exception. As such, students must move from
being mere consumers of meaning, to creators of meaning or as Wesch puts it, from
being knowledgeable to knowledge-able (Wesch, 2014).

This creative learning process that the workshop sought to embody is in
many ways aligned with the goals and processes of filmmaking in education.
Although far from an established or dominant presence in the Irish curriculum, film
education was a notable reference point in considering the position and direction of
the workshop. In the Irish context the FÍS Film Project is perhaps the most
significant exploration of the filmmaking process in education. Initially created as a
pilot project with twenty-eight participating schools, FÍS was introduced in 1999 to
support Ireland’s new primary school curriculum. The project was developed in
conjunction with the Institute of Art, Design and Technology (IADT) and
subsequently rolled out nationwide with the support of the Department of Education
and Skills and the Professional Development Service for Teachers (PDST) (‘About | FÍS Film Project,’ n.d.).

Participating teachers are provided with a classroom resource pack that
seeks to assist them in the introduction of film as a medium and as an instrument for
creative expression. Implementation is highly dependent on the teacher and student
group in question, resulting in a variety of outcomes and processes, including the
creation of documentaries exploring local history, historical re-enactments, stop-
motion animation, short story adaptations etc. (Gallagher, 2014). FÍS has proven
highly successful, receiving largely positive feedback from schools involved. While
the opportunity to participate in such activities facilitates the development of
techniques required for storytelling through film, including planning, scripting,
storyboarding, cameras, lighting, audio, set design etc, throughout this process
children also develop skills in communicating, teamwork, problem solving and
responsibility (‘IFI Film Focus: New Directions in Film & Media Literacy,’ 2014).

Despite its success FÍS is currently focused solely on the primary sector.
Filmmaking as a mode of creative expression is largely absent from the second
level curriculum. Indeed as a medium film does not feature on the second level
curriculum until Leaving Certificate, at which point it is introduced to the English
syllabus as an optional comparative text (‘IFI Film Focus: New Directions in Film & Media Literacy,’ 2014). Here it may be analysed and discussed in conjunction with a range of other works including plays and novels, along thematic lines.

After such a lengthy hiatus, it is unlikely that students will grasp the specificities of film as a medium (‘IFI Film Focus: New Directions in Film & Media Literacy,’ 2014). Indeed the manner in which film is introduced at Leaving Certificate level does little to facilitate such an understanding, focusing predominantly on the film narratives in relation to the other works in question rather than the creative, aesthetic and communicative processes at work. The current presence of film thus provides little support in regard to film media literacy or recognition of its potential as a creative mode of expression.

There are a number of projects currently operating which aspire to introduce second level age students to the processes of film making including Tallaght Young Filmmakers (TYF), Co. Wexford Youth Film Project (CWYFP), The Junior Galway Film Fleadh & Hamlet Workshop and Young Irish Film Makers (YIFM). However while the aims of such projects are significantly aligned with those of FÍS, they are notably local in focus and thus considerably less far reaching in terms of participation and scale. Such initiatives are not integrated into the syllabus, but rather take the form of one-off or extra-curricular projects and are therefore almost exclusively aimed at transition year students. Despite this a series of pilot projects undertaken by the IFI as part of a national study into film education entitled Film Focus have indicated the potential of filmmaking at second level. Through activities such as documentary making and poetry adaptation, it was found that film education held much promise in facilitating the development of a number of essential skills (much aligned to those developed through FÍS) as well as supporting students’ engagement in the existing curriculum (‘IFI Film Focus: New Directions in Film & Media Literacy,’ 2014).

**Implications for the Workshop**

As noted above, this project will seek to embody many of the positive attributes demonstrated by filmmaking and editing projects such as FÍS. This alignment is perhaps unsurprising in that both represent examples of creative, narrative learning. In exploring the potential role of digital storytelling in the study of Macbeth, this research will strive to address the notion of such attributes as merely tertiary or supplementary to the existing curriculum. As such, it will attempt to assess potential ways in which the benefits of collaborative engagement and creative exploration may be extended through to second level as integrated learning activities.
While the specific focus in relation to *Macbeth* is of significance in this regard, the utilisation of digital as opposed to filmic processes is also of relevance here. While the filmmaking projects discussed offer considerable potential in relation to the development of skills associated with narrative learning including collaboration, problem solving and creativity, mastery of the technical aspects of filmmaking form a substantial part of this process. Although these elements are essential to the appreciation and understanding of film language as well as representing a worthy learning experience in themselves this inevitably necessitates that such projects are focused to a large degree on tool literacy. In contrast this workshop will seek to avail of the more intuitive and immediate aspects of digital technology to facilitate greater engagement with the learning material through narrative processes. This may prove an asset in attempting to integrate such approaches to a range of curricular activities.

The more direct nature with which students are able to navigate, create and review their concepts within such an environment also presents advantages in allowing greater focus on the broader issues of how students learn to read, write and communicate with the aid of technology and while participating in digitally mediated environments (Banaszewksi, 2005). This focus is also facilitated by the relationship between digital storytelling and mashup culture. Mashups involve the reuse/rewriting of art, information or content generally for purposes that were not intended by the original creator. Mashup culture permeates much of the digital environment. With the development of Web 2.0 the ability to copy, remix and combine content has been greatly facilitated, occurring not only in relation to art works, but increasingly in the functionality of online applications (Lamb, 2007).

An interesting appropriation of the mashup in the context of education and research is the video essay. Essentially a form of digital storytelling, the video essay is an increasingly popular mode of exploration, analysis and expression in the field of film criticism. Video essays commonly involve the combination and juxtaposition of edited clips from the work under analysis in order to explore an individual film, group of films or concept (Lavik, 2012). Video essays enrich the remit of film criticism in allowing researchers and theorists to explore the medium through the very materials that constitute the area of study, namely sound and moving image. Though somewhat curtailed by the strictures of written academic discourse, the video essay is a growing feature of film studies at third level (Keathley, 2012).

In the context of film studies the video essay offers a number of particularly pertinent learning opportunities to students. The video essay invites students to conceptualize their arguments and analyses as a form of practical communication.
Thus in addition to considering the basis of and concepts relating to such arguments, students must acknowledge for example their audience. How will the demographics, characteristics and beliefs of this group inform the reception and hence the presentation of their ideas? Added to this students must envisage a focus for their video and how this is intended to alter the beliefs or attitudes of their audience. Lastly students must consider the genre of their video, be it voice-over commentary, vlog or parody. In light of this the student is compelled to make certain decisions regarding the appropriate form and rhetorical choices in order to convey their argument (Hinck, 2009).

Thus while having the benefits of allowing students to view their analysis as applicable beyond the realm of academia to a certain extent, the video essay also affords the opportunity for deeper consideration of the medium under investigation. Although a rather specific application of the mashup, the video essay demonstrates the potential of such work in an educational context.

In relation to this workshop the embodiment of mashup culture poses numerous opportunities in relation to exploring the stated research objective of examining how students may be appropriately prepared for full participation in society. While creating a digital story the student is generally required not only to create their own material, but to locate, evaluate, combine, manipulate and utilise sourced content in order to communicate their desired concept. This process embodies the definition of information literacy as outlined by the American Library Association and certainly has implications for development in this regard. Added to this it presents significant implications for the development of the student’s media literacy (‘Presidential Committee On Information Literacy,’ n.d.). Through this process students are required to engage critically with mass media and thus develop an understanding of its nature, the techniques embodied within it and how these are used as well as their impact. In combining and manipulating a variety of media forms, students are encouraged to consider how these produce meaning, are organised and construct reality (Duncan, 1989). In turn students begin to understand how to participate in this process. Skills such as these are of growing significance in an increasingly diverse and media saturated society.

Therefore in much the same way that projects such as FÍS develop an understanding and mastery of the specificities of film as a medium, digital storytelling has an important role in the development of digital literacies. Added to this in utilising the more intuitive and immediate nature of digital tools this project will seek to extend possibilities for experimentation, thus allowing greater focus on narrative learning through a variety of media. This aspect of digital storytelling is
also availed of in exploring the potentially more seamless integration of such processes into various elements of the curriculum, in this case the study of *Macbeth*. It will therefore seek to diverge from the existing perception of narrative learning and creative media as stand-alone, extracurricular additions, towards a potential role as integrated analytical and creative curricular activities.

**Zeega**

In order to examine the potential of digital storytelling to deepen students’ understanding and engagement with *Macbeth*, a half-day workshop was conducted with a group of 15 Irish, transition year students. The software program utilised in the facilitation of this workshop was the media editing platform, Zeega. Zeega was selected for a number of reasons. In the first instance Zeega is a freely available, online tool. This presented obvious advantages in regard to accessibility as all participating students could access the programme via the school’s wifi network. Secondly the programme features a remarkably intuitive and easy to use ‘drag and drop’ interface.

The system works by curating freely available media from SoundCloud,\(^\text{12}\) Tumblr,\(^\text{13}\) Flickr\(^\text{14}\) and Giphy,\(^\text{15}\) allowing users to combine this sourced material with their personal content to create digital stories. The user can then drag this content onto a series of slides. Here media can be combined, images and animated GIFs (a basic animated image) may be overlapped as well as text added, to formulate the story. On completion these stories can be shared online via social media, personal web domain as well as Zeega’s own web platform. The events and outcomes of this workshop will be detailed in the next chapter.

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\(^{12}\) SoundCloud is a social media audio platform that allows users to upload, record, promote and share their originally created sounds (‘About SoundCloud,’ n.d.).

\(^{13}\) Tumblr is a microblogging platform that allows users to post multimedia and other content in a short-form blog (Boutin, n.d.)

\(^{14}\) Flickr is an image and video hosting website. It is widely used to share and embed personal photographs (Terdiman, 2004).

\(^{15}\) Giphy is a search engine that allows users to find and share animated GIF files
Preparation and Organisation

The proposal to conduct this workshop was made to the same school which had participated in initial data collection in the form of classroom observation and interviews. As such, at this point both the school principal and a number of the school’s English teachers were familiar with the objectives of the research as well as the principal researcher herself. As was the case in the aforementioned classroom observation and interview stages, initial contact regarding the facilitation of the workshop was made to the school principal via letter. A subsequent phone call established that the principal was satisfied that the school could participate and for the workshop to proceed, as such the researcher was referred to one of the school’s senior cycle English teachers.

Contact was duly made with said English teacher by phone. As a participant in both the interviews and the classroom observation, the teacher in question was at this stage familiar with both the research as well as the principal researcher and expressed an interest in further participation. A face-to-face meeting was thus scheduled in order to discuss possibilities for the facilitation of the workshop.

At the meeting subsequently held in the school’s staffroom, a number of options were considered. It was suggested that a group of transition year students participate in the session. This was deemed to be the most fitting proposal and following the consideration and discussion of a series of practicalities, it was agreed that the workshop would be carried out with such a group over a two hour afternoon session on the 3rd of April 2014, with the schools main computer room agreed as the venue. As noted above the workshop was to be conducted by the principal researcher, with a research assistant also present. As earlier noted the assistant
would not engage in the workshop, but would be seated at the rear of the room, in order to document events using pen and paper.

**The Session Outline**

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**Introductory Lecture**

**Understanding Digital Stories**

As noted previously, the workshop involved the participation of fifteen transition year students. The objective of the workshop was to introduce students to the concept of digital storytelling, what it is as well as the processes and skills required to create a digital story. Once such an understanding had been established students would be invited to create a digital story that analysed and interpreted a scene from *Macbeth*. In this case the chosen scene was Act 2, Scene 1 or ‘The Dagger Scene’.

As such the session began with a brief introductory lecture outlining the role of storytelling in cultural development and the implications of changing modes of communication such as oral, print and digital for this. This lecture was accompanied by a slide presentation, displayed for students via a digital projector at the head of the class. Students were encouraged to consider the broad spectrum of stories available to them in the digital world, the variety of media formats as well as cultural and temporal variations. They were thus invited to contemplate how such a wealth of variation might be utilised for the purposes of expressing themselves. Moreover, as well as seeking inspiration from those of others, how might they utilise this environment to contribute to their own interpretations? This portion of the workshop therefore sought to instil in the students the concept of becoming creators rather than mere consumers of meaning. As such it was significantly informed by both
Wesch’s concept of the student as creator, as well as the contentions of Ohler with regard to the potential role of digital media in this process.

The concept of utilising the variety of freely available information and media in the online environment to create digital stories was then introduced. This idea was likened to the concept of a collage, whereby a variety of unrelated sourced or original visual representations and media may be combined or presented in alternative contexts to create a new and meaningful image or message. It was noted that this was a concept similar to that frequently exhibited in online memes, whereby images are often taken out of context and displayed in new ways, entirely altering their meaning.

Fig. 7 (‘That Feeling,’ 2013) below is an example of this that was presented to students during the session. On the left we see a still from the film the *Dark Knight* (Nolan, 2008). This image depicts the film’s principle antagonist The Joker. Having stormed a party at the home of Bruce Wayne, the joker threatens various guests, interrogating them as to Wayne’s whereabouts. The tone is menacing and tense, the joker’s appearance and demeanour are chilling. However with the addition of the caption, “That feeling you get when you’re listening to a person and you have no idea what he’s talking about anymore”, as seen on the right, our perception of the image changes entirely. Rather than threatening the joker’s expression conveys confusion and bewilderment. As such the image takes on a new, comic tone and meaning.

Fig. 7 Image comparing the influence of presentation and media combinations on meaning. (‘That Feeling,’ 2013)

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16 Alter ego of Batman, protagonist of *The Dark Knight*
What is Zeega?

The online editing application Zeega, was then introduced as a potential tool for the construction and realisation of digital stories. Students were given a brief description of the processes involved in utilising Zeega, before being shown an example of a digital story created using the application. The story entitled *Lives of Conductors* is a simple combination of still image, animated GIF[^17] and text displayed on a series of slides (or ‘pages’), accompanied by ambient sound (trains) and music. In order to progress the story the slides are clicked through by the user.

The narrative of *Lives of Conductors* is a cleanly constructed, atmospheric account of the storyteller’s daily train commute and her observations of a conductor with a resemblance to the actor Jeff Bridges. A still from *Lives of Conductors* is shown in Fig. 8 (Russell, n.d.) below.

![Lives of Conductors](image)

Fig. 8 A still Image from the Zeega entitled *Lives of Conductors* (Russell, n.d.)

Students were invited to reflect on the story’s simplicity of form and structure, to consider the manner in which modest elements can inform one another and be combined to create a strong message.

**Digital Storytelling and Interpretation**

Students thus began to comprehend that through digital storytelling they could engage critically with mass media, locating, evaluating and manipulating a variety of resources in order to convey personal interpretations and concepts. In this way they

[^17]: A GIF or graphics interchange format file, is a type of image file introduced by CompuServe in 1987. An animated GIF file comprises a number of frames that are displayed in succession in order to convey a basic animation
could begin to consider how meaning is created through a variety of media and how such techniques may be emulated, moulded and combined with their own material to construct new meaning. As such through digital storytelling students may begin to interrogate and participate in, rather than merely to consume the conversations of mass culture.

Once the essential concept of digital storytelling had been established for students, the idea of how it might be used in the context of schoolwork was introduced. In this regard the process of analysing and interpreting the work of others was discussed. Students were asked to consider their study of narrative texts such as *Romeo and Juliet*. It was put to the group that in seeking to investigate and comprehend such work, their personal interpretation and engagement, their ability to distil their own meaning from the text was of great significance. If students were capable of reinterpreting, interrogating and analysing a text to such a degree that they could express their personal reading in an entirely new representation, this could represent a genuine and substantial comprehension of the work.

It was thus proposed that having achieved this, students would be better placed to write, to speak about and confidently analyse the work in question. The particular relevance of personal interpretation in relation to dramatic works like *Romeo and Juliet* was discussed. It was noted that in the case of such works the text is merely a starting point for visual and performative development. There is no definitive version, rather they are continuously re-interpreted, as a variety of disparate performances. Therefore in considering such work it is both apt and beneficial that students contemplate how they themselves would convey such narratives. This portion of the workshop was greatly informed by the work of Dewey with regard to the interaction between internal and external learning experiences, as discussed in the review of literature.

Digital storytelling was thus suggested as an avenue for processing, developing and expressing such meaning. Through the creation of a digital story students would be compelled to engage critically with their learning material in order to develop a thorough understanding. They must then reconstruct this understanding in light of their own personal experience to create a new interpretation. As has been earlier discussed, this offers great potential for exposing students to the varied learning styles and approaches of their peers; however in encouraging students to engage with mass media to achieve this, digital storytelling represents a particularly opportune medium. While as noted above this process has significant implications for the development of student’s information and digital literacy as well as their understanding of mass media, this approach also enables
them to utilise the images, sounds etc. of contemporary culture as a conduit for engaging with and interpreting their learning material. Digital storytelling may thus facilitate greater connection between the learning material, the wider experience of the student and contemporary culture in a more general sense. In this way the meaning of the material is extended through the process of digital storytelling.

**Creating a Digital Story**

**Presentation of the Piece**

With these ideas having been established, students were introduced to the central activity of the workshop. As had been suggested they would create a Zeega, digital story interpretation of an existing work. The piece in question was, as has been previously noted, Act 2 Scene 1 or ‘The Dagger Scene’ of *Macbeth*. As transition year students the group had not encountered *Macbeth* within their academic curriculum. Therefore, while a casual enquiry as to whether any were familiar with the play did produce several affirmative responses, it was necessary to assume that for the majority at least, any prior knowledge of the piece was minimal or absent.

The speech was initially presented to students in the form of a video clip. This was an extract from the 1982, BBC production of *Macbeth* starring Nicol Williamson in the title role (Gold, 1983). On completion of viewing, the text of the piece was presented for students on screen. This was read through by the workshop facilitator who invited interpretations from the group as well as offering explanations of the various sections.

**Conceptualization**

After a brief discussion as well as clarification of the piece, students were divided into groups of three. Each group was assigned a particular section of the scene on which to concentrate. To assist them they were presented with the printed text of the scene, along with contemporary explanations. They were then invited to deliberate regarding ideas for the creation of a Zeega digital story version of the scene. In doing so they were advised to consider the following questions:

- What is he (Macbeth) feeling?
- What images does he convey?
- What is the atmosphere?
- How do you want the viewer to feel?
- How can you use different media (text/image/sound/animated gif) to convey all this?
Students were given ten minutes to complete the task. During this stage the facilitator visited each group to discuss their progress, responding to questions and venturing suggestions. This segment of the workshop was guided by the work of Joe Lambert and the Center for Digital Storytelling with regard to the significance of visualisation in the digital storytelling process.

**Using Zeega (Familiarisation)**

On completion of the conceptualization exercise, still in their groups of three, students were asked to turn their attention towards their computers. At this stage students were to begin the creation of their Zeegas. The groups were thus directed to the Zeega website and guided through the process of creating an account. Once each group had completed this process and had access to the Zeega editing platform, a series of simple exercises to familiarise them with the system commenced.

At this stage students were reminded that Zeega is a public platform, with any work being made available for view on the Zeega website. As such they should bear in mind that the same rules of expression, communication and behaviour apply here as in any other public space. If students do not wish certain material to be attributed to them, they should not utilise or publish it.

The first task required of the students was to retrieve one image from Flickr and add it to their Zeega. Once the image had been imported to their Zeega editor, students were asked to drag the image to the first page of their Zeega creation (Fig. 9 (Mc Cabe, 2014a))
Students were then directed to the text tool on their Zeega editor and asked to title their chosen image by adding a text layer (Fig. 10 (Mc Cabe, 2014a)).

![Image](Fig. 10, Step 2 in the Zeega familiarisation exercise (Mc Cabe, 2014a))

In order to familiarise students further with the text tool, they were then directed to create a new page and add text to this as shown in the Fig. 11 (Mc Cabe, 2014a) below.

![Image](Fig. 11, Step 3 in the Zeega familiarisation exercise (Mc Cabe, 2014a))

Students were then asked to repeat the process of importing media to Zeega, as they had earlier done with Flickr, this time retrieving animated gifs from Tumblr or Giphy.
At this stage students’ attention was again directed to Zeega’s editing tools. They were now instructed to return to Flickr, this time retrieving three images. Students were at this point invited to experiment with Zeega’s colour and opacity tools, layering images on top of one another or adding a colour filter (Fig. 12 (McCabe, 2014a)).

The aural aspects of Zeega were now brought to the fore for students. As such they were directed to retrieve one sound, be it musical or ambient from SoundCloud.

Having imported a variety of media and created a number of pages, students were advised that they could manipulate the order of their pages using the tool bar at the top of their screen. When satisfied with their arrangement they could click to play their Zeega. This could be carried out at any point during the creation process in order to review work in progress. Students were also advised that once completed they could share their work online via Facebook, Twitter, Tumblr using the ‘Share’ button, their Zeega’s url link or by utilising Zeega’s embed widget, to display on a webpage.

Although the need for caution in relation to the publication of their work was stressed to students, such functions were noted to be highly pertinent in relation to facilitating students’ participation in the conversations of media culture and as such their role as creators rather than mere consumers. This capability also has significant implications for extending the meaning of student interpretation and analysis beyond the classroom and thus the potential significance of the learning material.
Completing the Zeegas

At this stage a level of familiarity with the functionality of Zeega had been established; as such students were now encouraged to continue working in their groups, on their Zeegas. They were advised to use Zeega’s editing tools and any combination of media, in a way that most appropriately conveyed their story. They were reminded to refer to the questions they explored during conceptualization.

The groups were to continue working in this way for forty-five minutes. After this time each group would present and briefly explain their Zeega to the class. In preparing this presentation students were advised to consider the following questions:

- What were the main conclusions of your brainstorming?
- What stood out for you about the piece?
- What were you trying to convey in the Zeega/ how did you want it to feel?
- Why did you choose certain images, sounds etc?

These questions were left on the screen, at the top of the classroom for groups to refer to as they progressed through their Zeegas.

The workshop facilitator monitored the activity of the class while they focused on their Zeegas. During this stage of the workshop the facilitator discussed the progress of each group’s work with them directly, their ideas and aspirations, as well as any challenges they encountered. The facilitator took the opportunity at this point to address any questions that arose as well as to venture suggestions that could further the development of each group’s work.

Presentation

The final section of the workshop involved a screening of each Zeega via the digital projector for the class group. This was to be accompanied by a brief explanation of the work, provided by a spokesperson elected by the group members themselves. It was proposed that these explanations should detail the choices made, what it was hoped to achieve and how each group set about realizing this. As with the decision to divide students into groups this portion of the workshop was influenced by arguments discussed in the previous chapter regarding the benefits of peer learning and fellow students as a source of inspiration and reflection.
Entry and Analysis of Findings

Participant Observation

In consistency with the grounded theory method underlying the approach of this research, analysis of participant observation data began to a certain extent during the observation sessions themselves. In line with the recommendations of Denscombe all data was gathered and organised in a uniform format (2010). The observation process employed by the researcher at this stage is best characterised by what Werner and Schoepfle term ‘descriptive observation’, whereby anything and everything is observed by the researcher (Werner et al., 1987). Therefore ‘raw’ data included observations detailing classroom proceedings, activities, interactions, gestures, environmental factors and equipment usage. At this stage the researcher was careful not to categorise the important from the trivial based on assumptions carried into the field. The adoption of such a method insured that nothing was taken for granted.

These straightforward observations were presented in such a way that the comments and inferences of the researcher were documented alongside. As noted by Miles and Huberman this careful display of data is an important element in the process of data reduction and selection (1994). Even at this early stage data analysis issues and trends began to emerge. Brief notes regarding possible relationships, implications or themes were roughly logged in the margin for further investigation. The potential implications of these extrapolations were elaborated during the process of typing and organising the hand-written observation notes. As such these initial notes proved invaluable during the collective scrutiny of the data.

When the observation sessions had ceased, with each session’s notes typed and formulated, the process continued with thorough examination of the printed, typed documents. Data was coded in order to highlight points of particular interest for further inspection. This stage of analysis is best described by what Paul Hodkinson terms ‘open coding’, whereby the researcher seeks to flag everything that is in the data (Hodkinson, 2008). Themes that emerged at this stage including words, phrases and meanings were tagged using a specific colour each time they arose in the notes, for example references to language were highlighted in green, references to creativity in red, media use in yellow etc.

The next phase of the process is described by Hodkinson as ‘axial coding’ (Hodkinson, 2008). At this stage the researcher is primarily engaged in the identification of ‘patterns, processes, commonalities and differences’ (Miles and Huberman, 1994). Consequently a number of patterns, trends and relationships
began to emerge. The data was then broken down, grouped and re-examined according to these themes. This process was repeated in an ongoing manner.

Similarly interview data was subject to this method of coding, break-down and grouping data along thematic lines. As such the examination of observation data in relation to emergent themes was carried out in conjunction with analysis of the interview findings, thus data was analysed along patterns and commonalities emerging from both instruments. Coding the data in this manner revealed a series of links, allowing crucial points to emerge from the mass of the overall data. Throughout this stage of analysis, initial findings were re-evaluated, developed and expanded upon. It was through this process, best described by what Hodkinson terms ‘selective coding’ that key illustrations of patterns and hence the analysis narrative began to emerge (Hodkinson, 2008).

Interviews

Similarly in the case of interviews, initial analysis began during the sessions themselves. Careful attention was given to the non-verbal indicators of the participants including gestures and expressions, with these being noted directly after the session. The process of reflection began during this preliminary stage as key issues and patterns began to emerge.

The session recordings were subsequently transcribed verbatim. The resulting transcriptions were invaluable throughout the process of analysis. Moreover, this approach played an important role in bringing the researcher closer to the data. However when considered in isolation the transcriptions inevitably had the effect of sanitising the data to a degree (Denscombe, 2010). In order to limit this recordings where listened to several times during the analytical process.

Every effort was made to acknowledge the meaning of factors that could not be imparted in the transcript, including intonation, pacing, emphasis and accents. To support the findings and give a sense of the voices that convey them, direct quotations were used where appropriate. This was particularly useful in the case of students, depicting authentically the distinctive way in which this more youthful group of participants express themselves. As Denscombe notes this enables the reader to ‘hear’ the interviewee’s perspective (2010).

As noted above the interview transcripts were reviewed and thoroughly scrutinised alongside the participant observation data. In a manner similar to the observation data the printed interview transcripts were manually coded according to Hodkinson’s process of open coding and axial coding with themes being denoted by colour as they occurred in the original transcripts. Having identified these key trends
and commonalities the interview data was broken down and regrouped along thematic lines, together with those patterns identified in the observation data. This phase of the process is described by Hodkinson as ‘selective’ coding. Through a long process of aggregation, comparison, matching and ordering of the data obtained at both the interview and observation stages a number of recurring themes and patterns began to emerge.

While computer-aided analysis may have facilitated this process, it was felt that this would not capture the richness of the data, as well as creating a degree of distance between the data and the researcher. As such the researcher began the process of clustering data along the themes in question. At the end of this intense phase seven categories were identified, each containing a series of sub-categories. The final phase in this process involved the presentation and discussion of these findings outlined in the proceeding chapters.

**Workshop Observation Data**

In keeping with the principles of grounded theory and in a manner similar to the interviews as well as the initial observation sessions, data analysis commenced during the workshop itself. The principal researcher made a series of observations regarding participant responses, activity and interaction. At this stage, possible relationships, implications and themes were identified for further investigation. The observation process adopted by the researcher at this stage is an example of what Werner and Schoepfle describe as ‘focused observation’ (Werner et al., 1987). Thus, guided by the insights gleaned during the earlier phases of the study, the researcher began to discern the relevant from the irrelevant. As such the researcher was particularly keen to note issues regarding group interaction, creative engagement as well as matters surrounding language and comprehension.

These were outlined in the immediate aftermath of the workshop. Subsequently such observations were developed as a detailed written account of the workshop proceedings from the perspective of the principal researcher in the role of workshop facilitator. This data was compiled and typed in a Word document. These findings would be examined alongside the observations of the research assistant.

The research assistant adopted a ‘descriptive observation’ style, noting anything and everything that occurred during the session. This impartial approach insured that nothing was taken for granted. Therefore, the focused observations of the principal researcher were tempered and augmented by those of the research assistant. These observations were provided to the principal researcher as a printed
Word document. This data was presented in a uniform manner similar to that employed by the principal researcher during the earlier observation sessions. As such straightforward observations including workshop events and proceedings, environmental factors and interactions were clearly delineated from the inferences of the research assistant, which were noted alongside in red.

Following some initial clarification and discussion, this data was scrutinised and examined along with that gathered by the principal researcher. Here too coding adhered to Hodkinson’s processes of open and axial coding (2008). As such this data was coded along thematic lines. For clarity patterns and trends were denoted by colour as they occurred in the raw observation data. At this stage a number of commonalities began to emerge. Both sets of data were largely found to support one another, although each provided some additional insights. The data was subsequently broken down and regrouped according to the themes identified. This process of scrutiny continued until all available information was felt to have been exhausted.

This procedure was carried out in conjunction with the analysis of findings from the questionnaire responses and thus data was analysed along patterns and themes emerging from both instruments. As such this phase of the coding process embodied what Hodkinson describes as ‘selective’ coding. Throughout this stage of analysis, initial findings were re-evaluated, developed and expanded upon. It was through this process that the research narrative began to emerge. The resulting findings are presented and discussed in the next chapter.

**Questionnaire Responses**

In relation to the questionnaire responses, scrutiny commenced upon first reading. At this initial stage data collection and analysis occurred simultaneously. From the outset a series of patterns and trends began to emerge. At this point preliminary observations were noted in the margin by the researcher. These early notes provided an invaluable resource during collective evaluation of the questionnaires.

Responses for each question were then collected and typed in a Word document. Scrutiny of these printed documents commenced and a deeper insight into key issues and trends began to emerge. As with data at all other stages of analysis a process of open, axial and selective coding was adhered to. The responses were thus colour-coded and subsequently grouped thematically by the researcher. As noted above, this procedure was carried out in conjunction with the analysis of the observation data. The process of data analysis was repeated until all the available information had been exhausted.
The resulting findings were combined with those of the participatory and non-participatory observation and are presented and discussed the next chapter. These findings were supported by direct quotes from the questionnaire responses. This enabled raw data to be shared with the research community, while conveying a more authentic representation of participants’ expressions. Quotations were attributed to their respective participants via the alias Participant A, Participant B, Participant C etc.

**Cross-instrument Approach**

The decision to group data along thematic lines was heavily informed by the research question. While it has been noted that data organised in this way may diminish the integrity of individual responses through their amalgamation into a collective summary, it was felt that the focus of the research favoured an emphasis on the group dynamic and the themes that emerged from this (Cohen et al., 2003). While a number of patterns and connections emerged between instruments, each method of collection revealed fresh data, shedding new light on the findings as a whole. The correlation of findings collected using a combination of means strengthened the analysis narrative, increasing its reliability and validity.

As noted above data was initially organised along these lines in its raw form. At all stages throughout the data analysis process the researcher was mindful of the inherent subjectivity of qualitative research previously discussed. As Geoffrey Walford puts it “All research is researching yourself” (2005, p. 98), thus an awareness of the preconceptions, interest, biases, preferences, background and agenda brought by the researcher to the process was paramount. With this in mind from the earliest stages particular effort was made to create marked delineations between the raw findings of the research and comments, observations or deductions made by the researcher. As noted above these were typically noted alongside the data itself.

At all stages the researcher remained cognisant of the fact that this process of analysis would inevitably be informed to some degree by their own biography, preconceptions and biases, yet such is the nature of qualitative analysis (Cohen et al., 2003). Rather than attempting to cleanse the process of this, subjectivity was consciously acknowledged and documented in the findings, maintaining clarity and honesty in the approach.
**Ethical Considerations**

Researchers must continually strike a balance between pursuit of the truth and the potential of this to threaten the rights and values of participants (Cohen et al., 2003). Ethical issues relate directly to the integrity of the research and must be considered at all stages (Bryman, 2015). As such throughout this research ethical considerations have been guided by the recommendations of the British Educational Research Association (Hammersley and Traianou, 2012).

The minor status of student participants underlined the significance of these considerations and they were thus ever-present in the mind of the researcher. As legal children, students could not be assumed to be on an equal footing with the researcher. While this necessitated that informed consent be obtained from both student participant and their respective guardian(s), it also brought to the fore issues concerning power and authority. It was important that participants at no stage felt obligated or coerced into participating, either by a teacher, the researcher themselves or any other authority figure.

Yet, while the child status of the student participants must be respected, the age group in question almost stands on the brink of adulthood. It was therefore necessary to assume that many degrees of maturity might exist between participants. These years can also be particularly vulnerable, necessitating a notably sensitive and responsive approach to each individual. Every effort was thus made to ensure participants were happy to engage in the research, as well as limit any perceived power differential between the student participant and the researcher.

In line with BERA recommendations it was crucial that both the students and their respective guardian(s) be fully informed prior to consenting to participate (Hammersley and Traianou, 2012). In relation to the initial classroom observation and interview sessions, seeking informed consent was essentially a two stage process. The researcher first sought permission from those adults responsible for the students in question, first the school principal and then in turn their English teachers. At this stage great care was taken to explain all aspects of the research to the teachers. Questions were invited and addressed ensuring they were fully informed as both prospective participants and guardians of minors.

With permission to progress with the research, participant observation commenced. As observation sessions did not involve any intervention in the student’s routine and were not focused on any single individual, written consent was not sought from students. However students were informed of the identity of the researcher and briefly of the research objectives at the commencement of the
primary session. At no stage did any student object or appear in any way uncomfortable with this.

With progression to the interview stage great care was taken in drafting the necessary information and consent documentation. To ensure thorough understanding of all relevant parties, separate informed consent forms, outlining the purpose of the research and its relevance for the proposed participant were drafted for students, their guardian(s) and teachers. The right of the participants to withdraw at any point was also emphasised here. Together with this, at all stages throughout the research process extreme care was given to protect the anonymity and confidentiality of all participants.

As with the classroom observation and interview stages in the case of the digital storytelling workshop, the process of obtaining informed consent comprised two phases. Permission to conduct the workshop was first sought from the school principal, before discussion and consideration by a member of the senior English teaching department. Great care was taken to inform all parties of the processes involved and to invite any possible questions. All individuals concerned were subsequently satisfied that the workshop would be of mutual benefit to both the researcher and the students, thus with permission to proceed, the workshop and accompanying observation commenced. Students were introduced to the principal researcher and research assistant as well as informed of the purpose of the research itself. At no stage did any student object or appear in any way uncomfortable with this.

In the case of questionnaires, great care was taken in drafting the relevant informed consent documentation. Such forms were distributed with the questionnaire itself and were provided for both student participants and their respective guardians. Of the fifteen participants seven completed questionnaires were returned along with the relevant consent forms. At all stages due diligence was taken to protect the anonymity of each participant.

Another important consideration was the cost/ benefit ratio for participants. The research seeks to bring about benefits for students and teachers by developing a greater understanding of the potential of digital media to rectify the disjuncture between formal learning contexts and contemporary perceptions and expectations of narrative. While this could potentially have direct benefits for teachers involved in the study, informing their practice and offering additional resources for example, this will inevitably come too late for student participants. However it was felt that some consolation could be afforded in that the researcher’s intervention could draw students to review their approach to *Macbeth*. In this way students may potentially
embody Jean McNiff’s concept of the ‘Reflective Practitioner’, enhancing their consideration of the play (2012). Moreover in the case of workshop participants it was felt by both the principal researcher and the facilitating teacher that the workshop itself would prove advantageous, in exposing the students to new skills and learning techniques.

Together with concerns regarding participants, the research must also consider the ethical implications of the study for the educational and research community. As such great care has been taken to ensure an authentic representation of processes and findings, prioritising that these should be presented in a manner amenable to reasonable scrutiny. Moreover in order to ensure that the content of this research is of optimum benefit to educational policy makers and professionals every effort will be made to guarantee its maximum accessibility (Hammersley and Traianou, 2012).

**Limitations and Delimitations**

Resource constraints, primarily temporal and financial, informed the scale and scope of the research. While a broader sample may have been preferable, this would not have been possible considering the depth of insight into the experiences of teachers and students necessitated by the research question. Under the circumstances of the research, broadening the sample would inevitably have resulted in a more cursory level of discernment.

The decision to adopt a more focused and vigorous approach was also informed by the contention that all educational approaches must to a certain extent respond to the specific needs of the student group in question. A broad outline of student experience would not be in keeping with this responsive position. As such an expansive approach was dismissed in favour of a method that would allow an investigation of process as it occurs in context, namely the case study.

**Summary**

To conclude the methodological approach deemed most appropriate to the requirements of the research question was essentially qualitative. This was informed by the objectives of the research in striving to explore the nature of the experiences of teachers and students engaged in the study of *Macbeth*, as well as the possible significance of digital storytelling to the specific questions concerning this research. Considering this it was imperative that the research approach acknowledge the capacity of participants to think feel and reflect, thus necessitating a qualitative mode of investigation.
The centrality of experience, relationships and context to the research also influenced the breadth and scale of the study. Under the circumstances of the research, broadening the sample of participants would inevitably have resulted in a more cursory level of discernment. Considering the depth of insight into these factors necessitated by the research question such an approach would have been wholly inadequate. Together with this, the focused, case study line of enquiry was informed by the contention that all educational approaches must respond to a certain extent to the needs of the student group in question. This responsive position could not readily align itself with a broad outline of student experience. Thus rather than a large randomised sample, participants were purposively selected to investigate specific characteristics of a population that are of interest to this study. In this way it sought to explore the significance of the research questions in the reality of the classroom environment and hence the feasibility of further investigation in this area.

The research instruments utilised to implement this strategy were participant observation, the semi-structured interview and the questionnaire. While the researcher strove to consider all advantages and possible limitations of this approach, it was felt that overall the character of these instruments would yield the most authentic and revealing insight. The decision to use multiple research instruments was further supported by the discussion of the merits of triangulation. Through the use of multiple methods the perspective of the researcher was less likely to be distorted by a singular viewpoint. Together with this, by offering a more diverse insight into the various issues at play, triangulation could serve to instil confidence that findings are not merely isolated artefacts. Instead details uncovered through the use of multiple methods may reveal connections, comparisons as well as contrasts (Lin, 1976).

The process of data entry and analysis was similarly informed by the questions at the heart of this research, with the utilisation of grounded theory and a narrative approach. At all stages the researcher was conscious to balance the pursuit of research objectives with the well-being of participants and at no point was this sacrificed. The following chapter will detail the insights yielded throughout the application of this approach while engaging with teachers and students in the school environment.
Chapter Four: Presentation and Discussion of Findings, Part 1

Introduction

As Patton notes,

“Interpretation means attaching significance to what was found, making sense of the findings, offering explanations, drawing conclusions, extrapolating lessons, making inferences, considering meaning, and otherwise imposing order” (2014, p. 480).

Thus this chapter will present, analyse and discuss the findings that emerged from the methodological investigation discussed in the previous chapter. In doing so it seeks to present and consider a detailed and authentic representation of the experiences of both teachers and students engaged in the study of Macbeth in the Irish Leaving Certificate curriculum as well as the possible significance of digital storytelling to the specific questions concerning this research. This discussion will be broadened in Chapter Five to consider the theoretical implications at play in relation to these findings, in line with the literature (as discussed in Chapter Two). In this way the research seeks to create a rich, cognisant, analytical response, rooted in lived experience. As Blaxter et al. put it, “as a researcher, you are engaged in a continuing round of evaluation and re-evaluation” (2010, p. 240).

As noted in Chapter Three, in relation to the interviews, student interviewees were identified as Student 1, 2, 3, etc. while teachers were denoted as Teacher A, B, C and D. In relation to the questionnaire, respondents are referred to as Participant A, B, C etc. Communicating an authentic and ethical account of the views and experiences of all participants was paramount at every stage. To this end a number of direct quotations have been included throughout this chapter.

Having said this, the collection and analysis of data could not be isolated from the thoughts, feelings and experience of the principal researcher. Indeed this process has been shaped by her interpretation and as such the researcher herself is an intrinsic element of the research process. Yet at all stages due care has been given to insure that such quotes are not taken out of context, but credibly presented.

Subsequent to the detailed analysis of data collected throughout six weeks of participant observation and the comparison of this to the findings of the semi-structured interviews (fifteen involving students and four with teachers) a plenitude of compelling insights presented themselves. Comprised of considerable review, reduction and cross-analysis of findings, this process was completed only when a
point described by Lincoln and Guba as “redundancy” was reached (Maykut and Morehouse, 2002, p. 144). More simply put, this is the point in the research process at which no new or relevant data is being uncovered. In all seven areas of note were identified. A list of these is as follows;

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The significance of these areas in relation to the direction of the research and the subsequent development of the digital storytelling workshop will be discussed throughout this chapter.

**Perceptions and Attitudes of Students**

**Prior Knowledge of the Play**

Due to the established practice within the school of studying a Shakespearean play at Junior Certificate level (usually *Romeo and Juliet*), all participating students had some knowledge of such work prior to embarking on their study of *Macbeth*. Therefore students had a certain level of familiarity with the language and style of the plays, which both teachers and students found to be a notable advantage.

“We did *Romeo and Juliet* so that kind of got us kind of thinking in that mode.” (Student 3)

“we would tend to do *Romeo and Juliet*, it’s very much centred at their age group and they tend to like that so as a result then I think it’s probably not so daunting then at Leaving Cert” (Teacher C)

However in the particular case of *Macbeth* such knowledge appeared rather limited. While most students had heard of the play before studying it at school, this information was somewhat narrow in scope and only one student (a fifth year repeat student) had seen the play in its entirety.
Background knowledge reported by students included, being aware of some of the “famous quotes”, that it was a Shakespearean play, that it was often called ‘The Scottish Play’, that it was unlucky to say “Macbeth”, and that Lady Macbeth was, “meant to be a bit weird”. One student had read a condensed version of the play in primary school, while another had seen her sister (a performing arts student) act out elements of the play. Other interesting references included a Simpson’s parody.

Several students did report having no prior knowledge of Macbeth, but this did not appear to put such students at any particular disadvantage. Most described a positive perception of Macbeth. One of these described the plot as, “a complete shock!” while another expressed her surprise stating that she, “didn’t expect him to go and like murder everyone!”

**Student’s Impression of Macbeth**

Almost all students reported enjoying the play, with many pointing to specific elements of the plot that intrigued or entertained them,

“There was a lot of twists and stuff” (Student 17)

“…you get what he’s talking about you know? It seems realistic that a guy would, you know take the opportunity to become king or you know whatever and that it would just completely backfire (laughter)!” (Student 8)

It was interesting to note that many of the students stated a preference for Macbeth over their Junior Certificate Shakespearean text, Romeo and Juliet. A variety of reasons for this were offered including more interesting and sophisticated themes as well as a perception that the, “characters were more believable”

Students communicated a wide commentary with regard to their appreciation of Macbeth. A number of students expressed a regard for the level of lucidity with which characters as well as plot were drawn. Such students appeared compelled by the veracity of the play, expressing a connection to or empathy for Macbeth’s moral decline:

“Macbeth is so different to like how he turns out at the end, because you know at the start he is all like brave and valiant and as he progresses you kind of see his hunger for power and he just kind of declines into madness” (Student 19)
“I really liked how he developed his characters and they went on and how like he showed so well that like power and greed can bring the worst out in you and Macbeth is a victim to his wife’s manipulation and the witches’ prophecies and he wasn't like that at the start.” (Student 10)

Yet conversely for a number of others it was the fantastic nature of the period setting and supernatural elements that evoked admiration.

“I thought it was really well put together, how everything came together all at once and the prophecies and everything. How they had this strange way of coming true” (Student 20)

Relevance for Students
While most expressed a generally positive view of Macbeth, what seemed to emerge was a perception that although enjoyable the play belonged within an educational context. Few seemed to have considered Macbeth as anything other than an academic work. Macbeth was to be appreciated primarily as a school text with statements such as,

“I did (like it), yeah I really did. We could have done worse plays to be honest” (Student 9)

“It wouldn't really be my type, but for school it was alright” (Student 12)

“I think it would be more of a school thing, but I wouldn’t mind having to go back to it.” (Student 14)

Few seemed to have considered the possibility of experiencing the play outside an educational framework. When posed with this question students often took prolonged periods to consider their answers. Once contemplated the reaction was mixed.

“Maybe… I dunno... Maybe, ‘cause I liked it” (Student 7)

The expectations and perceptions of student engagement held by teachers appeared to reflect this attitude. When drawn on the pertinence of Macbeth for
students, responses were generally in line with the below remark by Teacher A that *Macbeth* was…

“Relevant (to students) because it’s on their course, that’s as relevant as I’d say it would be”

Teachers perceived (as had been indicated by the student interviews), that while students enjoyed *Macbeth* as a work, this was only insofar as could be expected of a school text. As such *Macbeth* belonged very much to the school environment. Despite this most were conscious of the broader, potential benefits the study of *Macbeth* held for students. All expressed a hope that students would enjoy the experience of examining the play and that this would have some lasting and enriching benefits for them.

“I’d hope you’d have given them something that they’d say ‘oh’ maybe even in ten years time if they saw *Macbeth* on somewhere that they might go and even with a critical eye” (Teacher C)

However the general feeling was that *Macbeth* was simply an element of the curriculum that needed to be covered. While perhaps more enjoyable than other areas of the course it was thought that most students experienced a deep sense of relief on completing *Macbeth*. If the play were to resonate in any meaningful or lasting level it would be for students with an existing inclination to continue their study of English at third level. As such for both teachers and students *Macbeth* was very much the reserve of academia.

This was a cause for concern for Teacher B, who noted that this was, “A big mistake”. This teacher stated that due to the restrictions of the curriculum they could not teach *Macbeth* in the manner that they would prefer. While expressing a personal passion for Shakespeare, Teacher B was an advocate of its removal from the curriculum, as due to such restrictions it was not possible to convey *Macbeth* in a way that would personally or meaningfully resonate with the majority of students. It was felt that under the present circumstances this could be achieved to a greater extent through the study of more contemporary texts such as those of Arthur Miller or Tennessee Williams, where barriers like language would not be as significant.

Teacher B was particularly dissatisfied and exercised by the current structure of the curriculum and the notion that students were not illuminated to an acceptable degree. This was not however the general consensus. It was the
contention of Teacher C that Shakespeare was an important part of the syllabus. While Teacher C acknowledged that students might not enjoy studying *Macbeth* and that many may never return to Shakespeare, it was felt that students should at least be offered the opportunity to experience Shakespeare at second level. Despite an awareness and acknowledgement of the shortcomings of the current approach to Shakespeare this appeared the more prevalent sentiment among the teachers.

**Daily Practice**

**General Approach**

In general student reports of the approach to *Macbeth* and the findings of the classroom observation were in line with one another. Students described reading the play as the primary classroom activity. In three of the four participating classes reading of the text was supported by listening to an audio performance, while in the remaining class the teacher preferred the students themselves to read the text aloud. In two of the class groups teachers would occasionally screen video segments of the play, and this was also noted by students during the interview sessions.

The analytical approach to the play was described by students as being primarily teacher led. Classes would generally begin with a brief summation of their current position in the text, the group would then go through the play scene by scene, with each segment subsequently explained by the teacher. The class group would then note these explanations and underline quotations as directed by the teacher.

“Well we just listened to the cd and then (the teacher) stopped it and explained everything” (Student 11)

Once teachers were satisfied that students had a comprehensive understanding of the play’s plot, they began to consider the significance and development of characters. At the closure of this preliminary meeting of the text, students were examined on their knowledge of both plot and character. This initial study was followed by a second meeting in sixth year. On this occasion students would watch a film version of the play and if possible a staged production. Throughout this meeting, elements of the play under investigation included themes, imagery, ‘scenes of compelling drama’ as well as language.
Variations in Teaching Style

While all class groups followed this same basic structure, a number of subtle, but significant variations revealed themselves in the approach of individual teachers. While in two of the three classes that utilised audio recordings teachers opted to briefly summarise the scene they were about to listen to, the third teacher would go directly to the section of the text in question. Forgoing this step appeared to present some difficulty for students. In a general sense those students who had received an introduction appeared more animated and engaged with both text and performance, responding visibly to events as they unfolded. In contrast those students who did not have the benefit of an introduction appeared to struggle, often so concerned with keeping up with the printed text that they displayed no visual or audible reaction to the narrative.

The manner with which teachers approached the analysis of the text was also of note. While as mentioned above this was invariably teacher-focused there were a range of degrees to which this was evident. In the case of Teacher A, analysis would simply consist of said teacher going through the text line by line and offering an explanation to the students. Students would dutifully note these explanations in the text, with communication and even eye-contact being extremely limited.

While questions were occasionally posed by the teacher, these tended to be of the simple 'yes or no' variety. Added to this if a response was not immediately forthcoming the teacher would generally offer the answer themselves. Questions were rarely posed by students, those that were tended to relate to their required obligations, such as tests and homework. As such students appeared somewhat disengaged from the interaction. This process may have been reflected in a comment by one student during the interviews.

“There were some lines when we were reading through and it was kind of like (the teacher) would just read the notes at the side and like I’d already read them myself, so I don’t know sometimes I thought it would be better to get kind of like a different view on things” (Student 9)

While the remaining three teachers also adhered to this process whereby the teacher would explain each subsequent section, these explanations tended to be less literal and regimented, with a greater degree of communication between students and teacher. Teachers in these classes would offer greater context for the play, drawing comparisons with well-known historical figures or current events.
Teacher B in particular was conscious of the propensity for becoming preoccupied with language and the potential of this to deter students and thus adopted a more flexible approach in their interpretations.

“you know, you take eight lines and you are trying to summarise it in one. ‘You know this is all he means’. I mean obviously that’s simplifying it, but…”

This teacher in particular encouraged a high degree of student engagement, structuring their explanations and analysis around questions posed to the class group. Unlike other participating teachers, in cases where a response was not immediately forthcoming Teacher B would persist, letting the question hang for a number of seconds, directing it to a particular student, offering prompts and opening the question to the class group. This was very much a conscious effort on the teacher’s behalf, who noted,

“you are kind of nurturing a relationship with them there the whole time, not just in the class, but outside, so they feel comfortable to talk. “

While students were often initially reticent with regards offering a response, this approach appeared to have the desired effect and as a result the analysis would quickly develop into a class discussion. This emphasis on student engagement, noted during the classroom observation was underlined by comments during Teacher B’s interview session.

“for me classroom discussion is very important as well”

In contrast to the other class groups these students were not overly concerned with transcribing the teacher's words, but rather in adding their own contribution to the discussion.

However with the exception of this Teacher B, all teachers seemed to accept and assume a more passive approach to analysis, centred on transcription. This was reflected during the observations in that while explaining particular elements to their class, teachers would frequently spell words they had mentioned for students and ask if students had finished transcribing what had been said so far, before moving on with the lesson.
Student Engagement
Dictation and Hand-outs

With the exception of Teacher B, all participating teachers employed some form of structured dictation. This would generally concern scene or character analysis and would be either written on the board or read aloud for students to take down. These dictations were generally not discussed in class, their intended purpose appearing to be individual student study. In addition to this all teachers provided some form of hand-outs for students and it appeared that these along with dictations were intended to form the basis of student answers. Indeed sample answers were often included within hand-outs. This was supported by the comments of Teacher A that...

“They’d be very much be led as I said by me, yeah very much”

“It’s the hand-out and it’s the book and that’s it. So it doesn’t sort of go out beyond that realm for them”

This was also apparent during an observation session where students were asked to read aloud answers they had prepared as part of a homework assignment. It was noted by the researcher that many of the students used identical phrases in their answers. Several for example referred to ‘an outburst of emotion’ and MacDuff’s ‘upright and honest nature’. This indicated that their answers were based on a common source, likely in-class dictation or photocopied hand-outs.

In general hand-outs were dispersed and read aloud for the class or simply retained by the student for later consideration. However in the case of Teacher B hand-outs were utilised as an aid for generating discussion. Rather than simply reading the text the teacher would ask questions regarding points raised within it. Students were invited to venture counter arguments and it was noted by the teacher that all interpretation of the play was subjective, “So if you feel differently, that’s fine at Leaving Cert level”.

Student Appetite for Greater Participation

The varying degrees to which analytical interrogation and engagement were encouraged or facilitated were reflected in the student interviews. Some students appeared rather disengaged from this process, seeming resigned to a more passive and repetitive approach. It was felt that this was simply the most appropriate and effective way to study the play.
“well I always like covering the text the first time around and then after that I just get sick of it, but I don’t think there is any way you could change that or improve it.” (Student 13)

“When we do it in school I’m just looking at the exam so I don’t really like put my own opinion on it” (Student 5)

“the question can be really very difficult, but you can only write on the information that you know like from the book.” (Student 10)

In other cases, students reported dissatisfaction with the level of prescription involved in the study of Macbeth. These students expressed a desire for greater opportunities for discussion and integration of personal ideas and opinions,

“I didn’t like the way we kind of just learned off points for the characters and things. We didn’t really talk about them as much as I would have liked. I think I would have like preferred for us to come up with our own points.” (Student 4)

Students such as these were aware of the disadvantages of relying solely on the notes and while this was generally viewed as an inferior approach, students admitted to a broad reliance on them. Despite a general willingness to move away from this model, most students lacked the confidence to venture or develop their own opinions. This was reflected in responses such as,

“The teachers pretty much tell you ‘ok this is what this character is about and this is...’ and you pretty much write it down word for word what she says or he says you know?” (Student 8)

“you kind of have to follow a certain thing” (Student 12)

“Obviously in the back of your mind you’d be thinking oh what do the notes say and all that” (Student 3)

While as had been noted during the classroom observation a number of students reported collaborative learning in the form of class discussion, comments such as the one below suggest that for some students this deliberation did not go far
enough. Therefore these discussions were not understood as an effective forum in which to develop concepts and responses. Rather they were interpreted as a somewhat superficial and informal activity.

“We came up with words and stuff for him (Macbeth), but that didn’t really help us in our answers. It was mostly off sheets and things like that” (Student 4)

The cursory nature of certain in-class discussions is possibly reflected in a comment by another student who felt that such discussions resulted in a type of herd mentality, limiting the development of personal interpretation. She described a process whereby the class would discuss an element of the play, before coming to a collective conclusion. This was an inhibiting process for the student who found it difficult to deviate from the communal consensus, which was deemed the ‘correct’ answer.

“We all talk about it and put in our ideas, but then we kind of come to the one conclusion at the end/ and we stick with that” (Student 12)

This could also indicate that as has been noted in the classroom observation, the majority of such conversations tend to be teacher focused and thus dominated by a single viewpoint.

It would therefore appear that many students did not view these discussions as a starting point that could be developed into true analytical or critical response to the text, but as distinct from their essay and exam answers. Such answers were instead developed through notes provided by the teacher.

Value of Discourse and Verbal Skills
The lack of emphasis on in-class debate was lamented by Teacher B, who noted that this was something the culture of the school did not actively encourage. This teacher explained that while oral presentations were becoming more important under the new Junior Certificate curriculum there was no real place for the development of such skills in the current Leaving Certificate programme. As such breaking away from the prevailing system whereby information is prescribed to students who passively absorb it, was a constant challenge.

It appeared that while acknowledged as possessing a number of diffuse benefits for students, the absence of a direct assessment at Leaving Certificate meant that oral discussion and debate were frequently eclipsed by more tangibly
credited elements of the course. This situation was underlined by Teacher A, who described the difficulty in encouraging students to venture ideas in class.

“You are met with silence”

“They know it they just won’t share it”

It was the contention of Teacher A that a number of factors were at play with regard to student’s reluctance to engage. While shyness was thought to be a major contributor, Teacher A perceived that stronger students were protective of their more innovative, original ideas and thus reluctant to share them. She noted that those students who did respond tended to be of average ability. It was the impression of Teacher A that when they did so it was generally out of pity for said teacher. Teacher A described one student in particular who, “would be not very good on paper, but very good orally and she would always add something original to a conversation”

It was noted that unlike the majority of her classmates whose frame of reference would consist solely of material provided to them by the teacher, this student would make associations with the art world and a variety of other areas. That these skills did not appear to be of significant benefit to her in terms of discernible exam results is interesting when we consider the contentions of Teacher B and the perceived, relative disregard for oral work in the school as well as the curriculum in general.

**Value of Original Contribution and Critical Thought**

All teachers described the value of original contributions and critical thought in student exam responses, contending that this is what distinguished an exceptional answer:

“It’s nice that when the examiner is sitting down with maybe 100 or 200 scripts maybe sitting in front of them that they get something that’s different, because they think, ‘oh yeah, there’s someone who’s thinking’” (Teacher A)

Such comments along with the description of Teacher A’s student with accomplished oral ability would indicate that while an additional bonus, the possible rewards were not relative to the amount of effort such creativity would require, nor the prospect paramount in the minds of students that they might get it ‘wrong’. This
was underlined by Teachers B’s description of the place of original interpretation in the overall marking scheme;

“obviously the marking system determines everything in other words as long as they’re answering the kind of, rubric that they have to, you know the PCLM\textsuperscript{18} system that has to make sure that the question has been answered properly throughout, doesn’t lose focus, all those type of things, but if they are doing all that correctly and then they bring in their own interpretation…”

As such the creativity of the student did not appear to be of primary concern or value. This meant that there was no defined forum or area of the curriculum where students could exercise or develop these interpretations nor any obvious rewards for doing so. As such there was a prevailing uncertainty as to whether this was appropriate at all, in the context of the Leaving Certificate. Though in some cases seeming genuinely frustrated by the largely passive approach, the anxiety as to how to develop their own interpretation and a concern that doing so would likely result in penalisation, led most students to stick to the proven option of the notes and rote learning.

“I think it’s like you’re scared that you’re going to be wrong” (Student 4)

While all teachers were conscious of this situation, the degree to which it was considered a cause for concern varied. While as noted above in the case of Teacher B this was a serious source of apprehension, for Teacher C this was less of a worry. For this teacher the skills of creative interpretation were something that could be developed at a later stage in students’ academic careers, particularly among those with a specific aptitude for English,

“I think third level will probably give them that if they chose to go on”

Notwithstanding this general feeling of discomfort with the notion of incorporating their own opinions into answers and a prevailing fear that these would be ‘wrong’ in any case, many students displayed well-formed and creative observations with regard to the text. This came to light when students were asked whether they

\textsuperscript{18} PCLM is marking system employed for the Leaving Certificate English Examination. P refers to clarity of purpose (has the question been answered?), C is coherence of delivery (is the response well structured?), L stands for language and M is mechanics (spelling and grammar)
observed parallels between Macbeth and contemporary figures or society in general. They made pertinent observations, comparing concepts explored in the play to conflicts in Syria and the Middle East, the events of the financial crisis and hierarchies in the corporate world;

“I think it’s actually possibly even got a bit more meaning today because… like the current situation and money and power and people going crazy for power and money” (Student 16)

“I guess I could see maybe corporate people being like that. You know climbing up the business ladder and stuff like that. All stabbing people in the back, but more like figuratively than literally” (Student 9)

One particularly interesting comparison drew correlations between Macbeth and the main character of Nicholas Brody in the popular Showtime series Homeland. The student noted the ambiguity of both characters and the challenge this presents to audience perception of them.

“Well I remember when we were doing it, I was watching Homeland and Macbeth really reminded me of Brody. He was doing like really terrible things, but you felt sorry for him at the same time. So at the time it just reminded me of that” (Student 13)

In this observation she displayed a deep understanding of Macbeth’s character and the ability to recognise and abstractly analyse the concepts explored within the text in alternative contexts. Yet even in this case, the student chose not to incorporate her ideas into her work, feeling unsure as regards their relevance:

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19 This refers to events surrounding the Arab Spring of 2010 and the Syrian uprising of 2011
21 Homeland (2011) is a television drama series produced by Fox 21 for the cable channel Showtime. It first aired in 2011 and stars Damian Lewis as Nicholas Brody, a United States Marine Corp Scout Sniper. Brody is being investigated by CIA Agent, Carrie Mathison (Claire Danes) who suspects he was ‘turned’ while held captive by Al-Qaeda, as a prisoner of war.
“Yeah I was going to in the middle of the Christmas exam. I was sitting there thinking ‘will I say this? Will I say this?’, but I didn’t in the end I didn’t know if I should or what.” (Student 13)

It seemed that while students possessed interesting ideas with relation to the text the ability to develop these into a reasoned response and to present this as part of a balanced argument alluded them. Statements such as the one below indicate that students may have had difficulty balancing their own views with those presented in the notes, resulting in a one-dimensional opinion piece. Lacking the skills to aggregate, contrast and assess differing viewpoints, memorizing preformed analyses appeared a safer and more rewarding approach in terms of results;

“… it’s hard to be diplomatic, because you either like him or you don’t and you kind of have to… you can’t say all bad things about him when you are writing an answer” (Student 20)

**Categorical Understanding**

**Segmented Syllabus**

This reliance on prepared notes appeared to leave little room for nuanced personal interpretations, such as the observations of Student 9 with regard to *Macbeth* and *Homeland*. Therefore, these interpretations did not seem to feature in their actual schoolwork. Instead students had a very structured and regimented view of *Macbeth*, which appeared to be informed by the process through which they approached different elements of the play in class. They seemed to understand *Macbeth* under distinct categories of; themes, characters, imagery and the play itself. Students would refer to having ‘done’ characters or themes, almost as though these were entirely separate and unrelated entities:

“We haven’t started themes or anything like that yet.” (Student 3)

“We only really… we haven’t really done any theme on it yet so we really only did the characters.” (Student 13)

“We went through the play first and just the plot in general and then we went through the characters after we got the plot sorted.” (Student 5)
There was a feeling that once one category was completed you could progress to the next, with no real sense of how these might relate to one another, or how they were presented in the context of the play as a whole. This segregated process was reflected in the teachers’ descriptions of the overall approach to the play, whereby classes would look at the text itself, followed by characters in fifth year. As previously noted classes would then watch a film version in sixth year after which they would in turn examine themes, imagery, language, scenes of compelling drama:

“and anything else that might come up (in the Leaving Cert exam)” (Teacher A)

This rigidity appeared to be largely informed by the requirements of the Leaving Certificate exam. Teachers were fastidious in covering every possible element on which students could be questioned. As these tended to fall within the isolated categories mentioned, so the in-class approach reflected this. While teachers did appreciate that this was limited and that students would benefit from a more nuanced and responsive consideration than that required by the exam, the demands of the curriculum did not appear to allow for this. Teachers were conscious of the reality that students would have to sit a written exam and that their primary role was to help each to achieve the best possible grade in this;

“you know it’s so exam focused... it probably doesn’t give them the space to appreciate it as a Shakespearean play, because I suppose they’d feel ‘well what can I do with that?’” (Teacher C)

While teachers did occasionally refer to the relevance of given scenes in relation to the development of certain characters, plot and character were generally considered in isolation.

This delineation was not only in terms of in-class scrutiny, but also in relation to source and reference material. While character analysis appeared to be strongly aligned with notes and hand-outs, this was distinct from plot and the experience of narrative, which was associated with the text of the play itself. However this categorical approach was particularly evident in the case of themes. Students tended to talk about themes as very abstract concepts, with little reference to what they were, their significance or meaning for the play. This was demonstrated in responses such as:
(When asked why she thought *Macbeth* was on the curriculum), “I think it’s just got a lot of the themes. There’s like a few different themes so like you are able to pick any theme” (Student 3)

**Memorization and Rote Learning**

This controlled understanding of the play described above, appears very much in line with the black and white, rigidity of memorizing notes. As earlier indicated rote learning and memorization were found to be significant and established elements of the curriculum. Both classroom observation and teacher interviews indicated that these were acknowledged and accepted practices. Yet while frequently utilised, rote learning was not without contention. What appeared to emerge throughout the research was a view that while flawed in terms of a holistic educational approach, this was the most appropriate method for students of all abilities to achieve the optimum result in the exam:

“I’d still be going back to the hand-out, because for me it’s very much they have to have it they have to learn it and they have to be able to reproduce it” (Teacher A)

Yet while this approach appeared adequate in meeting the needs of the exam, problems arose for students when attempting to understand the play as a whole. This seemed to be reflected in difficulty expressed by students in comprehending the significance of these categories in the context of the play. When occasionally required to deviate from such groupings or even move between them, students struggled. This came to light when students were questioned with regard to the main challenges of studying *Macbeth*. They reported problems comparing characters to one another, tracing the development of a character throughout or difficulty comprehending the relevance and implications of certain elements.

“trying to link one characters actions to another characters words or actions is a bit difficult as well.”(Student 17)

“I just think it’s the relationships and knowing who is with who and how the character develops and stuff.” (Student 11)

“There is stuff that you cover when you’re doing the characters that I never would have thought of and then I kind of think, ‘oh well, how is this relevant? I would never have guessed this’. I think some of its like reading too far into it, making too many assumptions.” (Student 13)
As such students were rather restrained and somewhat limited in their capacity to interact with the play. In some cases this blunt, steadfast approach was reflected in student’s perception of characters themselves. These students tended to view Macbeth as a wholly good man who turned entirely to evil, not comprehending the inherent humanity and ambiguity of the character throughout the play. This was apparent in statements such as,

“What probably frustrated me most was Macbeth as a character, him turning so fully to evil during the course of the play because at the start we saw the good in him and at the very end we did as well, so I kind of wanted it to turn out differently I suppose” (Student 9)

The prevalence of this attitude also presented itself during a class discussion concerning the degree to which Macbeth was personally responsible for the events of the play. Throughout this discussion there was near unanimous and vehement agreement among the students (despite numerous attempts by the teacher to introduce a counter argument) that Macbeth was entirely responsible for his own downfall. Students were highly critical, stating that he had a choice and suffered the consequences of that choice. In this instance students showed no pity or empathy for Macbeth, no interest in considering the events that had led him to make certain choices rather they were resolute in Macbeth’s culpability for his own choices and actions.

**Extensive and Demanding Nature of the Syllabus**

**Prioritising**

The issue of time arose again and again throughout the research. During the classroom observations teachers were under visible pressure to complete the play on schedule and progress to the next segment of the curriculum. This pressure appeared to inform the proportion and quality of time given over to analytical discussions in a number of class sessions. Such discussions appeared to be considered auxiliary to progression through the text and ensuring a general understanding among the students. This was reflected in comments such as those below from Teacher C,

“Before we started to give, very definitely give kind of if you like hand-outs or that, we maybe did something on characters. That discussion of it you would hope that
that was maybe … I’m not saying less educational, but would be you know seen in that way that it’s not just all about Leaving Cert”

“You know an A in your Leaving Cert is fine, but surely a love of something or an appreciation is more important. I know I shouldn’t be saying that (laughter) but you know! I do believe that really I do.”

Frequently time demands did not allow for such discussions, while in other cases teachers were compelled to rush through them. This resulted in cases such as those earlier described whereby teachers would offer answers to their own questions if responses from students were not immediately forthcoming. Combined with the natural hesitancy of students this created a rather tense atmosphere not conducive to open discussion and debate. The result was generally a one way oration, with very little student contribution.

In instances where such time pressure was particularly evident, teachers would appear somewhat irritated by questions posed by students. Rather than opportunities for debate and engagement ventured by the students themselves, these seemed to be viewed as distractions from the task at hand, that being the completion of the segment of the play allocated to the class session in question. In some cases if a conversation did develop, with students beginning to respond to one another’s questions the teacher would appear agitated and concerned that the group was digressing from its purpose. In addressing this teachers would redirect students’ focus to themselves or to the text.

This issue was evident even in the case of Teacher B, who as has earlier been noted placed particular emphasis on facilitating and encouraging discussion among their students. A session of note in this regard consisted of a class debate being cut short in favour of a teacher delivered lecture. In this case the teacher was visibly and audibly hastening through their explanations and acknowledged the disadvantages of this, apologising to the students for all the “talking at them”. The pressure on the teacher to stay on schedule with their curriculum coverage was underlined towards the end of the session when the teacher remarked, “Ok 43 seconds left”.

The strain felt by teachers to complete the course in the prescribed time frame was evident throughout the teacher interviews, with comments such as,

“you’d be breaking your neck to finish it then for the Christmas exam” (Teacher A)
“It’s kind of an ‘oh God, I need to get to page such and such, by such and such… or else!’” (Teacher B)

“you plan your class and plan to have all your methodologies lined up and then of course a discussion will lead it off track” (Teacher D)

Teachers had a number of targets to meet throughout the study of Macbeth and these were largely in line with the categories previously discussed. As such they appeared to be constantly striving towards the completion of these targets and on many occasions this seemed to take priority over ensuring greater engagement and understanding among students. While analytical discussion appeared most affected by time restraints on a number of occasions teachers were restricted even with regard explaining the section of the play being covered to students. This issue was reflected in comments made by teachers during class such as,

“These (scenes) are short we’ll fly through them” (Teacher A)

The priority given to the text’s completion therefore greatly informed the regimented categorical approach to the play. Students like their teachers appeared eager to complete each topic in good time and move on.

The Strain on Students

While burdening teachers with a large degree of strain, covering the prescribed material in a clear and accessible manner within the given timeframe also presented a number of challenges for students. The ability of students to relate characters, themes and events to one another was greatly challenged by the length of time taken to go through the play’s narrative in class. The process of reading, listening (and in some cases watching) the play scene by scene over 35 minute class sessions, meant that completing Macbeth took almost an entire six week term. Teachers were conscious that this was a heavy burden for students in addition to their other studies:

“They are juggling how many other subjects? They’re higher level, ordinary level… like some of them, the weaker ones would have to spend a lot more time and then the higher levels spend lots of time because they want to get a good grade” (Teacher A)

“Ultimately it’s very stressful for them” (Teacher B)
The lengthy duration of engagement with the play's narrative also resulted in confusion for a number of students, with many expressing difficulty following the events of the play. They tended to forget earlier exchanges and thus failed to see the significance of incidents that occurred later in the plot, as well as difficulty relating various elements of the play to one another:

“Sometimes you kind of forget what’s happening and I used to have to read over it and see what happened before so yeah that’s kind of hard.” (Student 4)

(What do you think are the main challenges about studying it?) "I think just remembering the way everything happens and the order that it happens in. I found that hard” (Student 6)

“You just need to keep on summarising it in your head and going back over” (Student 3)

Although this was the advocated approach of the school's English department, Teacher B in particular was conscious of the difficulty posed by the drawn out study of the play's story:

“They wouldn’t actually watch the production until sixth year… that they would kind of study it, which I think is a big mistake you know”

While presenting problems regarding students ability to follow and recall plot, for Teacher B this also presented concerns for students perception of *Macbeth*, in that this initial contact with the play, introduced it as an academic work to be studied, rather than a piece of drama to be enjoyed.

**Issues around Language**

**A Barrier to Engagement**

A significant factor in the lengthy task of reading the play was the time given over to deciphering the Shakespearean language. The challenge presented by the Elizabethan English was cited again and again by students and teachers. Indeed most students understood this as an entirely distinct language:
“I think because it’s a different language it can be kind of difficult to write about. I don’t really know what to write about when I’m writing about it. So I’d find it more difficult than poetry” (Student 20)

This was a perception that appeared to be shared by some of the teachers, one of whom (Teacher A) noted,

“the language maybe for starters. For some of them are ok, but that probably slows down the initial contact because you’re trying to explain it and maybe translate it to a certain extent.”

As this teacher also indicates the complexity of the language necessitated that progression through the text be frequently paused, in order for the teacher to provide its meaning. Inevitably this significantly slowed advancement through the play.

As the quotes from both the teacher and student above imply for a number of students the complexity of the language was an added disincentive to engage creatively with the text. Many students were utterly daunted by the language. This remained a significant obstacle for them throughout the process of studying *Macbeth*. Many described becoming altogether lost with regard to the dialogue and narrative at points throughout the play, resulting in disengagement and boredom:

“Sometimes in places it’s just like the language, I’m like ‘I don’t know what they’re talking about anymore’ (laughter)” (Student 16)

“Some bits got a bit boring. It was just the old language was kind of just annoying, but it was alright” (Student 12)

For many students the language was an obstacle that could be overcome with time. As these students became accustomed to the Elizabethan English they found translation less necessary, allowing for greater appreciation of the play itself. Many of these students cited their experience of *Romeo and Juliet* at Junior Cert level as an added asset, facilitating this process of assimilation:

“at first the language was hard to understand, but once you kept going through it then like it was…(good/ alright)” (Student 12)
Yet while language presented a greater challenge to some students than to others, almost all expressed varying degrees of reliance on in-text printed translations, at stages throughout the play:

“If it wasn't for the kind of translations on the side of the text, I wouldn't know what it meant at all” (Student 5)

“Em I'm kind of happy that there was a little… you know off the side of the page there's a little translation thing. Otherwise I would have no clue what they were saying.” (Student 17)

While these were an essential aid to comprehension of the text, they presented some challenges for students. Several students found the process of referring to definitions disruptive, rendering it difficult to become absorbed in the play's narrative:

“You are constantly stopping to explain different pieces, what this bits about and how this effects the character so you kind of… all the stopping and starting kind of screws it up a bit” (Student 14)

“Sometimes the explanation is really long and you get lost and… then it's like 'ok I just don't know what's happening anymore, because I was trying to find out what they were saying there and…” (Student 16)

One student described attempting to alleviate this cumbersome process by simply writing explanations directly over the passage to which they referred. Maintaining a balance between understanding and engaged experience was found to be a constant challenge.

It was thus noted that while essential to comprehension of the play, printed explanations were limited in how much additional information they could provide before becoming a distraction to the student.

The Importance of Quotations
The difficulty of comprehending the text presented challenges for many students with regard to learning quotations. Quotations were deemed extremely important by teachers and students. During each of the observation sessions students were regularly advised by teachers of the relevant quotes and their knowledge of these
was frequently examined. The value placed on quotes was reflected in student responses, who stressed that these should be cited with precise accuracy:

“You need the quotes to get your answer” (Student 16)

“Yeah it’s important to have the quotes and important to have them like perfect” (Student 14)

“Quotes as well can be a bit tricky sometimes.” (Student 11)

Teachers acknowledged the large proportion of the students’ workload that learning quotations composed and noted that this presented a number of challenges for students. Difficulties encountered included problems with memorization as well as challenges using quotations correctly in exam responses. This was reflected in the below answers from Teacher A:

“The quotes I’d say they find difficult and how they sort of get them into their answers correctly”

“The quantity that we might mark as well is a lot”

Students’ lack of certainty with regard to quotations was observed on a number of occasions. Often when directed to a particular section of text by the teacher, students would request clarification as to whether this was a quote or not. It appeared that students did not choose quotes they felt supported their answers, but required the teacher to direct them to lines of possible relevance. These were then memorized.

“Um sometimes in places it’s just like the language, I’m like ‘I don’t know what they’re talking about anymore’ (laughter) and sometimes it’s just a bit hard to learn the quotes because of that.” (Student 16)

What appeared to emerge through interview responses as well as classroom observations was a tendency to memorize quotes before genuine comprehension had been achieved. This was particularly pertinent in a remark by one student, who described using a quote despite not being entirely sure if it supported the point she was attempting to make.
“Even though you have the glossary sometimes you are still unsure of what it means and then if you put it into quotes you are worrying, ‘does this actually have (anything) to do with my point?’” (Student 4)

The preoccupation of students with quotes, as well as their perceived importance perhaps underlines the value placed on transcription and memorization within the education system. While somewhat contentious in other areas of study, these activities with which students are accustomed and at ease, are both justified and required in relation to learning quotes. Students are thus compelled to devote a large proportion of time and significance to them.

**Multiple Media Forms**

**Audio Performance**

As has been earlier noted a number of media formats were employed throughout the study of *Macbeth*. Due to the lengthy duration of consideration required by the text, teachers felt it was necessary to use a variety of techniques in order to sustain students’ interest. The most prevalent of these during the initial meeting with the text was audio performance, with three of the four teachers utilising this. Among both teachers and students, reports during the interview sessions indicated that listening to the play aided comprehension in a diffuse and intuitive manner. Experiencing the play in this form, at this initial stage offered the benefit of further sensory clues. Students were able to discern meaning from the emotion and intonation in the voice of the actors, as well as that evoked by the addition of music and ambient sound effects:

“With the tape you have the sounds and you have the words so you can kind of just put it all together and you can see what's happening." (Student 17)

“Yeah that helped a lot. I wouldn’t have been able to read it without it.” (Student 12)

“By listening to that they can hear different tones, different moods all of those kind of things as well as looking at it and me explaining” (Teacher C)

It was felt that the combination of audio, text and teacher-led techniques left students better equipped to comprehend the play as well as visualise events as they
occurred. Moreover the audio offered students a greater sense of the drama and an understanding of the play as a performative work.

It was interesting to note that among the teachers who adopted the use of audio performance, there were some subtle, but significant differences in the manner in which this was integrated into class sessions. In the case of Teachers A and C it was noted that while reading and listening to the play these teachers would frequently pause the audio during a scene to explain the events taking place. This was in contrast with Teacher B, who would typically summarise the scene prior to listening and follow up with a class discussion of what they had heard.

While students tended to be more engaged by the recording when an explanation had been provided prior to listening, repeated pausing of the audio in order to provide explanations appeared to disrupt and alienate students. This would then be reflected in students’ attentiveness throughout the session, their willingness to venture questions as well as participate in debates. In essence while beneficial the manner in which audio performances were utilised appeared to have a significant bearing on their effectiveness. As such even with the audio component some students expressed a difficulty in sustaining interest in the play over the course of a class:

“Sometimes it's a bit difficult because it all just gets a bit grey when you’re in class and you’re getting tired after 20 minutes of listening to it” (Student 16)

**Video Performance**

While as part of the general programme for approaching the text classes did not watch a film version of *Macbeth* until the recapitulation in sixth year, during classroom observations the use of video clips by two of the teachers (Teachers B and D) was noted on several occasions, these took the form of Youtube videos screened via the class computer and overhead projector. Students who had watched Youtube clips of the play reported the benefits of this in aiding understanding as well as retention:

“it’s really helpful to have Youtube” (Student 6)

“Our teacher, she sometimes puts up video clips of different scenes and I thought that pretty like… it really got you to visualise it in your head, the actual scene, so I felt I could relate to it more after that” (Student 3)
“Our teacher showed us parts of it as it was done on stage so that helped us a lot I think, because we could see what was happening instead of just trying to imagine it, so that helped us a lot I think.” (Student 4)

While students were enthusiastic with regard to the benefits of such clips, teachers who utilised them were also positive, finding them to be a particularly effective tool in their teaching repertoire:

“I try to get them to watch for everything you know as much as possible. I find it very helpful.” (Teacher B)

The decision of teachers A and C not to play videos during the initial meeting with the text is perhaps indicative of the segmented view of the curriculum earlier discussed. As such rather than a unified and complimentary experience of the play, performative consideration would remain firmly within the time allocated to the stage production and film screening in sixth year. This is not to suggest that teachers did not appreciate the value of performative examination of the text. While of the four teachers observed two opted not to screen videos at all during the preliminary examination of the play, experiencing a performance both on stage and screen was deemed important by all teachers, with regards to student understanding and perception of the play. Their views in this regard are reflected in the below comment from Teacher B:

“We are going to see Macbeth now in a couple of weeks and that’s em… That’s something that I would fight for you know in terms of time”

Practical Obstacles
While informed to a certain degree by the experience and attitude of the teacher in question, the decision not to include a greater variety of media during the preliminary meeting of the play was largely influenced by a number of practical issues. Here the issue of time was brought to the fore once again.

All teachers agreed that students would likely benefit from the integration of a greater variety of media to the curriculum. It was felt that such integration would assist students in relating to the text and even offer greater opportunities for students to integrate extra-curricular influences into their school work:
“Yeah I’d like to see it, I would. I’d like to see what they’d come up with, because I’d say an awful lot of them probably do things like that as well and there’s probably very little space.” (Teacher C)

“Definitely you’d need something to stimulate them” (Teacher A)

However, there was none for whom implementing this did not present some difficulty. While some felt that they did not have the technical skills to utilise such resources, others expressed concern that the necessary equipment would let them down, wasting valuable class time. Time was also an issue in relation to locating appropriate resources. Teachers were unsure of where to locate such materials and the time required to seek them out was simply unavailable to them:

“I haven’t time. Like time is the thing and if I start going searching the internet for images of blood in Macbeth and trying to get them all together and not be shuffling, when you’re not that IT friendly” (Teacher A)

“you’re not guaranteed that you’ll go up there and its working, you know and that is a challenge.” (Teacher C)

“Time is really the biggest challenge” (Teacher D)

On a number of occasions during the classroom observations teachers were heard to remark to students that they had intended to screen a video clip, but had run out of time. On one occasion the teacher attempted to screen a video only to find that the computer had gone into power saving mode during the class session. Noting the duration required to restart the computer the teacher concluded that there was not adequate time to show the clip. Another teacher appeared unfamiliar or uncomfortable with the computer equipment and required the aid of a pupil to operate it. Other obstacles included the lack of blinds, rendering classrooms too bright and inhibiting viewing, as well as maintaining a low volume level to avoid disrupting other classes or in turn disruption due to high volume levels from other classes.

**Implications for Perceptions and Experience**

An interesting reaction among students who at this point had seen aspects of *Macbeth* on film was that they questioned the interpretation of the director. Often
they were unsatisfied with certain elements and they began to consider how they might have done these differently themselves. They thus appeared to acknowledge the potential for different interpretations of the text, opening them to the possibility of a higher level of critical engagement with the play and greater ownership:

“I didn’t think they were as good, because it was kind of done differently than I would imagine it.” (Student 20)

Yet despite expressing an awareness of Macbeth as a multimedia work and a curiosity in this regard, most reported that this was not their primary experience of the play. At this point Macbeth was for most a printed text. While audio versions and Youtube videos were utilised in some instances, students perceived these as supplements to the primary version of the book. It seemed that the printed medium was deemed the medium for educational study.

“to be honest it would be more the printed text, because that’s what you do.” (Student 8)

“it’s just a book” (Student 6)

“the book, because you know I have to study it so it’s kind of back to the book all the time” (Student 17)

Students were very appreciative of Macbeth as a literary work. This came to light when asked if they found it difficult to picture the play’s vivid imagery or its more visual aspects through reading alone. While most students acknowledge that this was a challenge, many pointed to the descriptive language of Macbeth and the ability of this to evoke the visual aspects of the play in the mind of the reader:

“Shakespeare has a really good way of describing it, especially when Lady Macbeth says the thing about dashing the baby’s brains in, like it’s very hard not to see it in your head.” (Student 18)

“I suppose reading the text would kind of tell you. You’d be able to picture it yourself anyway.” (Student 15)
“I could really see like the castle and the room especially when... just after the first murder of Duncan. I could really see them framing the guards and stuff. I could see them coming over the hill at the end for the battle” (Student 5)

Summary
Through thorough examination of the experience of Macbeth at Leaving Certificate level it was thus discerned that the play was generally esteemed and appreciated by both teachers and students. However among both groups the perceived relevance and general benefit of studying the play was somewhat vague. While teachers generally advocated the place of Shakespeare on the curriculum, they held limited expectations that experience or appreciation of Macbeth and Shakespeare would extend beyond the realm of schoolwork for students. This contention was affirmed by the majority of student responses during the interviews.

In relation to classroom activity and approach, it was observed that despite a somewhat formalised schedule across the school’s English department, the nature of this experience was highly dependent on the style of the individual teacher. While in a number of instances the predominance of ‘teacher-talk’ was perceived to be a significant issue, the importance of effective questioning was found to be of compelling note, greatly informing the level of student engagement.

Although the use of a variety of media was considered to be a significant asset to the learning process, the apparent successful impact of such tools varied to a large degree. Rather than the application of any one tool, what emerged was the pivotal role of the teacher in utilising a variety of instruments including verbal interaction, technology and print media in such a way as to create an environment in which students feel comfortable and stimulated to participate. A number of factors inhibited teachers in the creation of such an environment. Practical issues around equipment meant that the integration of technology and multimedia into classroom activities was no easy task. This was compounded by the fact that teachers’ proficiency in the use of equipment varied widely. A distinct deficiency in the training and guidance required to address this was also reported.

Perhaps the most significant obstacle in the creation of a stimulating and engaging classroom experience was found to be the curriculum itself. Teachers and students were submerged by the volume of material required by the syllabus. Simply keeping up with coursework was found to be a constant struggle, rendering the consideration of more creative and enriching approaches unreasonable and highly improbable. Added to this was the limited extent to which such an approach would ostensibly benefit students in the context of the Leaving Certificate.
Rather the state examination seemed to advocate the dissection of the play into a series of categories which could be outlined, memorized and reproduced. While critical thought and original contributions were largely encouraged by teachers, the extent to which these could assist students in terms of improved marks was limited due to the structure of the Leaving Cert marking scheme. Students perceived this and understood the risks of venturing their own interpretations as outweighed by the possibility of getting it ‘wrong’. As such a process of prescription and memorization prevails.

**Digital Storytelling**

The insights obtained thus far informed the direction of the research significantly. While at its outset this study may have sought to address challenges experienced by teachers and students through the development of specific technological interventions akin to *A Conversation With Sir Ian McKellen*, insights afforded through engagement with teachers and students underlined the inadequacy of such a delineated and generalised response. In an effort to address and develop findings acquired hitherto, this section of the research therefore considers an exploratory study into the possible significance of digital storytelling to the specific questions concerning this research. Does digital storytelling have the potential to enhance engagement with *Macbeth* in the Irish Leaving Cert context and thus extend its meaning for students? If so how might such an activity manifest?

The existing research surrounding digital storytelling (a representation of which has been discussed in the review of literature) identifies a number of means through which it has been found to enrich the learning experience of students. As an educational activity it has been noted for its capacity to stimulate students to exercise and develop a variety of skills understood to be more conducive to preparation for full participation in society, as well as extensive realisation of the potential of individual abilities. The contemporary student must seek to function in an era of impermanence and change, while conversely education systems continue to reflect a culture that assumed the future would remain broadly similar to the past. Thus of particular pertinence in this regard is education’s facilitation of the role of student as a creator rather than a mere consumer of meaning or as Wesch described it, a departure from being knowledgeable to ‘knowledge-able’ (Wesch, 2014). Digital storytelling would hence appear to espouse many of the values underlying this thesis.

As has been noted on a number of occasions thus far, this research is strongly informed by the contention that all educational approaches must respond to
the specific needs of the individuals engaged within it. While each teacher possesses an individual style, this will in turn be informed by the unique requirements of each student group. Thus within a multitude of educational environments and contexts a vast variety of relationships will exist, informing a specific, considered response. This research therefore advocates a departure from an educational model that subscribes to the rigid propagation of a definitive, standardised approach in favour of a more considered and intuitive method.

In light of such aspirations, this element of the project will not seek to develop a generic digital storytelling design for broad application across the Leaving Certificate curriculum or indeed to represent a homogeneous student population, which in the view of this researcher simply does not exist. Rather this is an exploratory study which will seek to ascertain the potential (if any) digital storytelling may hold as a fluid and responsive teaching instrument. It will thus engage a critical, purposive sample in order to establish the possible benefits of digital storytelling in this area and hence to determine the value of further investigation and development.

In striving to achieve this, the study will seek to explore the following questions and whether they are deserving of further investigation: Does digital storytelling possess any potential for extending students’ understanding and experience of Macbeth and if so to what extent? How might teachers appropriate digital storytelling in a form that is conducive to this? What are the areas of potential note in relation to students’ response to this type of activity? What challenges might the introduction of such an activity hold and how could teachers acknowledge these in relation to their own processes as well as the specific needs of their students? Hence what potential could this approach realistically possess for realigning formal learning contexts to contemporary perceptions and expectations of narrative and thus the broader aspiration of developing an education system more attuned to the demands and values of wider culture? The purposive sample in this instance is composed of fifteen Irish second level students engaged in a digital storytelling workshop.
Workshop Analysis and Findings

The workshop provoked a series of interesting responses from the participant group. These responses revealed a number of areas with potential for further investigation. The manifestation of these in the workshop itself as well as their capacity to inform further research in relation to the role of digital storytelling in the Irish second level curriculum and narrative analysis in particular, will be discussed in the remainder of this chapter.

Focus and Engagement

Approaching the Task

After an initial few moments of activity, students began to settle and appeared attentive towards the workshop facilitator. The facilitator was introduced to the group by the teacher with whose assistance the session had been organised. It was explained to the group that the facilitator was a researcher from NUI Galway, who would be working with them for the remainder of the school day. Students were advised that this would entail their participation in a digital storytelling workshop. Following this brief introduction the teacher departed.

Students remained calm and attentive following the exit of the teacher. At this stage the researcher personally greeted the students, offering a brief description of her research background. The facilitator also drew the attention of students to the research assistant, who was at this point seated at the rear of the classroom. It was explained to students that the assistant would be observing and documenting the events of the workshop, but that this was purely for research purposes and in no way an evaluation of them or their work. The students appeared unperturbed by this and the presence of the research assistant was relatively unremarked upon for the remainder of the session.

Students gave an impression of attentiveness and engagement throughout the introductory lecture, responding as a group to casual questions posed by the facilitator and reacting with laughter to some of the more light-hearted slides. When requested to divide into groups of three for the conceptualization session, students were surprisingly quick to organise themselves and settle to the task, requiring little assistance from the facilitator. With the exception of one group all others appeared highly focused, with clear intentions as regards the project. Although attentive and responsive to the enquiries of the facilitator during this segment, students appeared eager to concentrate on their own ideas. They were keen to discuss these, before continuing to work with one another on the task at hand.
Multimedia Elucidation

In relation to the task itself, questionnaire responses indicated that while most students were taken with the creative freedom inherent in the formulation of their Zeega, a number were less keen on the idea of focusing their Zeegas on the *Macbeth* extract. Having been introduced to the process of creating a Zeega several students expressed a desire to select their own subject matter and thus for even greater creative interpretation:

“I would have preferred to also have some time to make our own stories or to find pictures and words that suited a song, or words and music that suited some pictures, just a little creative liberty.” (Participant A)

“I didn’t really like how we had a set topic to do” (Participant E)

“I didn’t like that we had to relate our story to the *Macbeth* play” (Participant C)

While the task of creating a Zeega was perceived as fun and creative, the process of interpreting the text was understood by many to be a difficult and unappealing. This is perhaps indicative of the novel aspect of creating a Zeega. Students valued an opportunity to express themselves, experiment and work with a new level of independence, thus many declared a desire for more in this regard. In contrast the process of interpreting the text may have held more of an association with their traditional in-class approach. Students cited a number of familiar challenges in seeking to understand and interpret the text. Language in particular was felt to be a particularly significant issue:

“It was kind of difficult at first, but then it became a bit easier. It was difficult because some of the language wouldn’t be language we would use today.” (Participant E)

“Going through the scene was tedious, but other than that it was engaging” (Participant G)

“The character of Macbeth was a little difficult to understand with the old English.” (Participant B)

Despite a number of reservations expressed by students with regard to interpreting *Macbeth*, many felt that their perception of the text changed having explored it in
this way. The power of the visual was significant here. Students frequently cited the benefits of exploring the text visually in aiding their understanding. This was acknowledged as a new and different experience for them:

“Generally I hate dramas, by doing Zeega it enabled me to look at the scene. I got in a lot of the details, therefore I could actually understand it. Putting pictures with each stage of the scene made it clearer” (Participant G)

“By putting the pictures and music with the scene it outlined the tension and the pictures made it memorable and clearer.” (Participant F)

“It helped put a different image in my head about telling the story.” (Participant B)

The way in which visual representation is described here as informing linguistic meaning could be understood as a reflection of processes inherent to the nature of performance itself and as such this is arguably a highly appropriate means of exploring and experimenting with such a medium. Moreover, the ability of this approach to augment understanding is perhaps indicative of how such methods can deepen student engagement with traditional narrative texts.

In compelling students to illustrate their understanding through a series of images and sounds that in their estimation embody this meaning, connections may be created between the students’ personal experience, as well as more contemporary representations of such meaning and the learning material itself. As discussed above this process could represent an important opportunity to extend the significance and relevance of the material for students. The comments of the students in this regard perhaps point to such a phenomenon and would certainly warrant further investigation into the potential of this process for enhancing engagement and the learning experience in general.

Also of note here is the capacity for this process to assist students in the mastery of a variety of semiotic modalities including linguistic, audio, spatial and visual or what was described in the literature review as ‘multiliteracies’. As previously discussed technological and cultural changes have necessitated a reassessment of what it means to be fully literate in the contemporary era. As Ohler noted while students must seek to become effective writers in order to communicate, so too must they strive to become effective media users (Ohler, 2008).
While students here have noted the manner in which multimedia representation facilitated their understanding of the text, reimaging the learning material in this way would also appear to have implications for their understanding of visual and multimedia communication. As such this necessitates further investigation into how these activities may facilitate the development of students' ‘multiliteracies’ and the pertinence of this in preparing students for life beyond the classroom.

**Freedom verses Focus**

While the concern of this workshop was to explore the possible advantages in relation to improving student's engagement with *Macbeth*, there is likely potential for a less prescriptive version of such an exercise, offering students greater freedom in the creation and development of their digital storytelling subject matter. As will be discussed in greater detail later in this chapter, it was noted that the vast majority of students encountered significant challenges during the presentation segment of the workshop. Considering this, such an exercise could pose a potential opportunity for greater focus on aspects regarding scripting, performance and narrative structure.

This could present additional benefits in that the utilisation of digital storytelling in the development of students’ expression and comprehension as well as their textual analysis, may offer opportunities for crossover between such activities. This is a challenge which many educators currently struggle to address, with these aspects of the curriculum in many cases perceived as largely separate entities (Mooney, 2010). Added to this the utilisation of digital storytelling in this regard could have implications for students’ ability to recognize how storytelling techniques are utilised in print, visual, oral and digital media, thus improving their skills in regard to ‘multiliteracies’ and their ability to engage with contemporary culture in an informed and confident manner.

However in seeking to introduce such an approach one concern is the balance between allowing students the freedom to experiment and develop their interpretations, while at the same time ensuring that they do not become distracted by the variety of media available to them. This was certainly a concern during this exercise and did appear to be an issue in the case of one specific group as noted above. Although in the instance of this particular group, they were found to possess a number of interesting ideas when prompted by the facilitator, they were notably scattered when compared to all other participating groups, lacking in both motivation and initiative. Unlike the other students, they required direct guidance from the facilitator in order to progress the task. While one of the group members did appear
eager to progress, the remaining two were easily distracted, particularly by their computer access and the variety of media available through Zeega.

As such although this group expressed a number of promising ideas they had difficulty focusing on the task of realising these. They had been assigned lines 57-65 of Act 2 Scene 1 and were particularly taken with the idea of creeping, stealthy movement embodied in this segment. They were encouraged by the facilitator to develop this idea and reminded of the time limit for completion of the task. Although continuing to procrastinate with regard to the actual creation of their Zeega, they did effectively realise this idea. Putting their Zeega together in the final minutes, they demonstrated the atmosphere of sneaking through the addition of an animated GIF of a stalking lion. They accompanied this with text quotations from the soliloquy, as well as the theme music from the 1975 film *Jaws* (Spielberg, 1975).

However, though there were issues regarding presentation, with their Zeega appearing somewhat unpolished, this Zeega clearly conveyed the concept and atmosphere they sought to communicate. The addition of *Jaws* theme music was also of interest. Students described their inclusion of the theme as an effort to communicate the mounting tension and progression towards a dramatic, climactic outcome. While such an attempt demonstrates a clear understanding of the piece as well as a worthy interpretation, it also suggests that this group were able to draw on their personal experience in order to extend the meaning of the material, again underlining the necessity for further research into the potential of digital storytelling in this regard.

They were able to recognise associations of drama and tension with the music, to connect this to their interpretation of the piece and draw on it to illustrate this interpretation effectively. Therefore while when left to their own devices this group was distracted and unproductive, with more direct intervention from the facilitator they appeared to work well and were successful in producing some interesting and effective results.

Similar challenges with regard to focus and distraction may also be reflected in questionnaire responses such as that below:

“I like looking for different videos to go with the speech because it was fun looking through them and finding some funny ones.” (Participant E)

While the balance between creative freedom and maintaining focus thus represents a point of consideration for further research in this regard, for the majority of students this did not appear to be a significant problem. Although keen to explore
the media possibilities available to them, they remained clear and attentive in relation to the task at hand.

As noted above it was found that with greater encouragement and intervention from the workshop facilitator, the group for which distraction proved a considerable issue were capable of producing an interesting interpretation. This underlines the pivotal role of the educator in assessing and responding to the needs of their students and demonstrates the significance of this as a decisive area of focus in relation to further research. While some may embrace the challenge of creative freedom, for others this could prove a daunting experience requiring greater structure and guidance. This will inevitably be a more pertinent issue the more freedom is introduced; as such assessing when a more hands on/off approach is required would appear to be a vital element in the success of such an activity, necessitating further investigation in this regard.

Technology
Creative Liberty through Usability
As has been earlier noted, due to time constraints and a lack of familiarity with the technical ability of the student participants, it was essential that a highly usable and accessible digital editor be employed in the creation of the digital stories. This was one of the primary factors that informed the selection of Zeega for this purpose. Yet even considering its accessibility it was interesting to note the ease with which virtually all students were able to navigate the system.

Each group appeared to easily organise themselves with one member working at the computer and the remainder of the group gathered around, offering direction, suggestions and continuing to make notes. Although as has been stated in the previous chapter a series of formal steps were laid out in order to familiarise students with the system. The groups appeared to dispense with these quickly, instead adopting a more fluid, trial and error approach of their own. They seemed eager to experiment with and realise the ideas they had laid out, progressing to the central task of creating their Zeegas.

During this stage of the workshop students did encounter a difficulty. They were unable to import still images from the photo sharing site Flickr. This site had been blocked by the school’s network due to perceived issues concerning security and distraction. Despite causing some initial confusion, students were generally unperturbed by this and continued to work on their Zeegas, combining GIFs, sound and text from the other accessible sources. All groups were observed experimenting
with Zeega’s editing tools, layering images over one another, adding colour filters and adjusting opacity.

While the ease and confidence with which students were able to navigate Zeega was observed during the session itself, so too was it implied in a number of student questionnaire responses. Students were surprised and impressed by the results they were able to achieve using the straightforward techniques of the system:

“I learned how to create short movies which consisted of pictures and sounds by creating a Zeega. I was also surprise to learn how easy the task was” (Participant E)

This perhaps underlines Ohler’s assertions detailed in the previous chapter, that in utilising digital media students are given the opportunity to explore academic content in their own language (Ohler, 2008). For such students the digital environment appeared to be largely familiar; indeed rather than a barrier the use of technology seemed to present the type of accessible conditions, which assisted in the process of meaningful assimilation. In this regard the potential of such tools to facilitate expression for students appears to present a significant area of focus for further investigation. While allowing students to explore the learning material ‘in their own language’ holds much promise for increasing the possible conversations which may occur in regard to such content, the apparent accessibility of these tools would seem to present notable advantages in assisting student analysis and interpretation.

**Technology and Education**

With regard to the use of technology in itself, students were notably practical in relation to their assessment of its role in education and wider culture. While comments and behaviour appeared to indicate that students understood the use of technology as familiar and enjoyable, they were also conscious of its importance as a required and fundamental skill. As such they were acutely aware of the pivotal role of technology in everyday life.

For many this informed their perception of digital storytelling as a relevant and worthwhile exercise. Several noted that they would likely be required to utilise such skills at a later stage and this was an aspect of the task they particularly appreciated. At the same time it was noted by students that this was in contrast to the role of technology in their ordinary school work, which many perceived to be insufficient. This was particularly prevalent when students were asked if they felt that this was a worthwhile exercise:
“Yes because digital media is such a huge part of our lives now, but there is little to no room for it in the education system” (Participant A)

“Yes I do think it is a worthwhile exercise as I will probably have to make videos like that at some point in my life for future careers etc. so I thought it was a very beneficial exercise” (Participant D)

“Yes because we are in a time of technological advances and I think we need to embrace this and apply it to education” (Participant G)

Such comments are perhaps indicative of a degree of dissatisfaction on the part of students with regard to the present role of technology in education, or indeed a certain amount of anxiety in relation to the implications this will have in preparing them for life beyond the school room.

While drawing students to reflect on the relationship between technology and education, in many cases the exercise also appeared to offer students a new perspective on learning in a general sense, inviting them to question the methods to which they were more accustomed and consider the value of alternative approaches. This finding was also a prevalent feature in responses as to whether participants perceived the exercise to have been worthwhile as well as being evident when students were asked what they had learned from the session:

“That we don’t need to learn things off. There are more effective ways of studying and working” (Participant G)

“That a story, feeling or state of mind can be portrayed in a clear and simple way using stories” (Participant A)

“I learnt that there was many different ways of putting a story together by using our imagination” (Participant B)

“It was educational yet enjoyable, but also different to the way we usually do work in school” (Participant D)

Comments such as these suggest an openness and a certain amount of eagerness among students to experiment with and utilise new learning approaches. Yet
despite this apparent willingness to consider new techniques, the degree to which student perception of what learning can or should be is informed by current curricular practice is prevalent in comments such as those shown below. Here the pressure of time alluded to so frequently in this research as well as the sense of learning as something to be completed in order to allow progression through the course is strongly suggested. Therefore, despite the fact that these transition year students were not currently engaged in a formal exam cycle, comments such as those below suggest that for a number of participants their understanding of education and thus the possible role of technology and narrative learning was heavily influenced by the form and restrictions of traditional curricular structures and their experience of this:

“If it was a subject in itself it would be good or if it were a section in the exam (i.e. like a comprehension question) but I don’t think that the entire curriculum should be taught this way because it is time consuming.” (Participant A)

“It would be time consuming rather than studying” (Participant G)

These remarks are significant when considered in relation to the ubiquity of information in the digital era as well as its inherent transience. Such a culture presents notable challenges to processes of standardisation and passive assimilation that currently pervade education systems.

The utilisation of digital storytelling appears to present significant potential in this regard through compelling students to synergise their learning material with their personal experiences as well as to consider such content in the context of contemporary media culture. However more extensive investigation is necessary in order to ascertain the degree to which this process may successfully challenge current perceptions of learning as well as experimentation in regard to further forms of implementation for achieving this.

Moreover, comments such as those above indicate a significant challenge for future research in this area and underline the fundamental need to engage with curricular and pedagogical practice. If digital storytelling is to be a realistic and implementable option for students and educators the aspirations and processes of the current system need to be addressed. Further investigation into the potential of such activities must be cognisant of this.
Creativity

Reflection on the Current Curriculum

The potential of digital storytelling to offer greater opportunities for creativity has been discussed on several occasions and indeed this was an aspect of the exercise that a number of students perceived and cited as an element of the process that they particularly enjoyed. As previously noted, with the exception of the group who required additional prompting and assistance from the facilitator, all others possessed clear intentions of what they sought to convey in their Zeegas and were keen to discuss these with the facilitator as she circulated the class during this section of the workshop. Students displayed a range of insightful ideas in relation to their assigned segments and were able to communicate these in innovative and effective ways:

“I did enjoy the experience as it let me be creative and it was also a lot of fun” (Participant D)

“There were no books and it was us doing it off our own backs.” (Participant G)

These students like many other educational stakeholders discussed thus far were conscious that creativity, while enjoyable was also a fundamental and crucial skill. As such while the enjoyment expressed may be indicative of a certain amount of novelty in relation to the exercise, the distinctness of the process did appear to illicit a degree of reflection in relation to the value of such work as well as its notable absence in the existing curriculum:

“I would like to see more of this type of thing in school because it helps get your imagination working” (Participant E)

“I liked the way we were allowed to do it on our own and be creative and show the story in a way we wanted by choosing our own sound effects, photos, visual effects etc.” (Participant D)

Such comments appear to imply a significant appreciation for student centred learning and active engagement. Rather than this kind of activity students appeared more accustomed to a practice of accepting their learning material as a finished product, to be engaged with in a largely static manner. In contrast the digital storytelling exercise compelled them not merely to assess and comprehend the
themes or images present in the text, but to consider the meaning of those elements in a more general sense and how they as creators would seek to convey them.

“I suppose it makes you consider the text in real life as you begin to think how it might look and sound.” (Participant A)

Thus the process appeared to indicate significant promise for the development of creative engagement as well as the benefits of such engagement for facilitating student comprehension of the learning material. These responses necessitate further investigation into this potentially decisive attribute of digital storytelling in such contexts.

**Internal and External Experience**

The freedom and flexibility inherent in the task endowed students with a level of responsibility, as has been previously noted this necessitated that in order to achieve the desired result they would be required to reshape, reassess and reconstruct the piece in light of their own learning experience and background. This phenomenon was born out in examples such as those shown below. This group were assigned the first section of the soliloquy lines 33-42. In Fig. 13 (Student Group 1, 2014), students overlaid an image of a dagger with that of a nuclear explosion emitting from a skull. Here students drew on their own interpretation of the confusion and turmoil in the scene and how this might be conveyed to an audience.

![Fig. 13 Still from student Zeega depicting overlaid images of a dagger and nuclear explosion](image.png)

(Student Group 1, 2014)
Later in their piece they strove to depict Macbeth’s confused state and the dreamlike atmosphere, while at the same time conveying the strong sense of tactility and touch that permeates the piece. They effectively achieved this by overlaying a series of animated GIFs depicting grasping hands as shown below (Fig. 14 (Student Group 1, 2014))

![Fig. 14 Still from student Zeega featuring overlaid images of hands (Student Group 1, 2014)](image)

Another group sought to invert the tension in their assigned piece through the use of humorous imagery, while the group behind Fig. 15 (Student Group 2, 2014) strove to suggest that time was running out for Macbeth and the pressure this exerted upon him.

![Fig. 15, Still showing image of a clock face layered over flames (Student Group 2, 2014)](image)
Thus students' backgrounds and experiences began to inform their understanding of the learning material, while in turn creating greater opportunities for the material itself to offer new perspectives on student experience. In this way the process appeared to extend the meaning of the text for students.

Yet in creating a new interpretation of the text this process could also have the effect of extending the meaning of the learning material in a more general sense. The role of student as creator is of significance here, again recalling Dewey’s contentions that in order for learning to constitute a truly meaningful experience, it must alter the material for those that come after (Dewey, 1998). Students appeared not only to enjoy the challenge of this process, but to derive a significant sense of achievement from it. Moreover, questionnaire responses as well as casual enquiry by the facilitator throughout the workshop indicated a sense of ownership of the text and hence confidence in their own interpretations:

“I liked finding images and clips that suited my vision of the speech.” (Participant A)

“It was important that we captured the tension of the scene we were given.” (Participant F)

This underlines the previously discussed claim that such a process is arguably a more appropriate means of engagement for students in regard to preparing them for life beyond the classroom. These examples appear to embody the notion that in considering, assessing and reimaging the piece, students are compelled to move away from a culture that assumed the future would be broadly similar to the past; hence it reflects the transience of contemporary culture and Wesch’s notion of moving students from being mere consumers of meaning, to creators of meaning or from being knowledgeable to knowledge-able.

Moreover, findings and comments such as those above may indicate that greater opportunities to extract and extend meaning from the text are experienced by students through this form of creative engagement. As such, they would certainly warrant further investigation into the extent to which this is possible through digital storytelling, how this may be augmented through various approaches, as well as the real benefits it could offer students in terms of their skills development and engagement with the learning material.
Opportunities for Re-evaluation

As noted in the previous chapter creativity is not merely about ideas, but about making judgements in relation to such ideas (Robinson, 2011). The process of creating a Zeega compelled students to explore and create their own concepts, while the practice of collaborating and combining such ideas with that of fellow group members would certainly have elicited a series of judgements in relation to such concepts. Yet as has been noted the unease with which students presented and expressed the meaning of their work limited the process of peer learning and reflection in this session.

In this instance it was found that students would require a greater degree of guidance if they as audience members were to fulfil their potential as an important source of critique and inspiration. In the view of this researcher it is essential that any further investigation in this area remain conscious of this challenge. Therefore, in order to fully facilitate and thus assess the potential of the creative process it is likely that a series of sessions, over an extensive time period, with particular focus on developing the skills of presentation, feedback and discussion, would be necessary.

Group Work
Inspiration and Challenge

Facilitating and cultivating the benefits of collaborative learning were central to the aspirations of this workshop. While the educational potential of collaboration has been discussed on numerous occasions, opportunities for this form of learning have been noted to be largely deficient at second level. While lamentable as a missed opportunity to enrich the educational experience of students, this also speaks to the disjointed nature of students’ learning careers.

Despite its virtual absence at second level, collaborative learning forms a substantial role in students learning experience at primary level, as exemplified in initiatives such as FÍS. Moreover at third level this is an essential and expected skill for undergraduate students. However, after the prolonged hiatus of second level, students frequently experience difficulty in this area (‘Joint Committee on Education and Skills: Third Level Curricular Reform,’ 2011). The workshop thus sought to explore the potential of digital storytelling as a conduit for collaboration, with potential for integration into the second level curriculum. In this way it aspired not only to enrich the learning experience of students at second level, but to establish continuity in the development of collaborative skills throughout their learning experience.
Collaboration essentially pervades digital storytelling as a process. As has been previously discussed digital storytelling embodies to a large extent the mashup culture that permeates much of the online environment. This in itself is significantly characterised by the practice of combining, manipulating and augmenting the work of others. Thus while these principles are implicit in the process, the workshop sought to extend them to the physical interaction of students engaged in the creation of a digital story. As such, the decision was taken to divide students into groups during this exercise.

Students themselves were conscious of the advantages of group work. This was expressed in responses such as:

“others’ ideas help me to understand the text better” (Participant E)

“Everyone had different ideas and by putting all these ideas together we got a clearer understanding.” (Participant F)

“Other people’s interpretations were particularly helpful” (Participant A)

Here students expressed an intuitive understanding of the benefits of peer learning. As has been noted in this research, others represent the most important facility for testing our own understanding as well as exposing us to alternative interpretations and learning styles (von Glaserfeld, 1998). This demonstrates a likely embodiment and potential benefit of the interaction between external learning material and internal experience facilitated by digital storytelling. Each group member forms an interpretation that is inevitably influenced by their individual background and experiences. This in turn informs and challenges the interpretations of their peers, encouraging deeper reflection on their own reading. As noted in the previous chapter this could have considerable implications for issues surrounding increasing homogeneity within the education system.

In this particular instance, harnessing the educational potential of group members’ alternative perspectives appears to have been intuitively understood by students. They readily acknowledged that through such a process they were drawn to reflect more deeply on the scene and their initial interpretation of it. As such, their understanding was broadened.

Yet this process was not without its challenges. Despite the appearance of relative organisation observed during the workshop, as well as the broad acknowledgement of the benefits of group work among questionnaire respondents,
a number of students expressed frustration and difficulty in coordinating and amalgamating the ideas of each group member:

“It may have been better to do the task in a smaller group or by yourself to avoid butting heads with your group when thinking about what way you wanted to present your story.” (Participant D)

“I would prefer to work alone because everyone has their own interpretation and it is hard to mash these all together into one Zeega. Every film has only one director.” (Participant A)

“(I prefer working) Alone as everyone has different interpretations of it” (Participant G)

These are challenges familiar to many who have engaged in such tasks. Yet the frustration expressed by students here may be a reflection of a degree of inexperience in navigating such situations. As noted earlier in this chapter, group work and interaction among students were not found to be commonplace among current classroom activities. Such interaction when it was observed was largely confined to teacher-led class discussion. Thus while the positive comments of students in relation to collaboration indicated the potential of digital storytelling in facilitating this form of learning, the challenges encountered by them during this process may underline the real necessity for greater opportunities in this regard. The potential of digital storytelling to fulfil such a role, indicated in this instance, supports the pertinence of further research in this regard.

**Vocal Expression**

With the teacher-led class discussions described above, found to be the only significant embodiment of collaborative learning in the existing approach to *Macbeth*, it is perhaps unsurprising that students were noted to have particular difficulty in expressing themselves vocally. While this was perceived during the earlier classroom observation and interview stages of the research so too was it borne out during the workshop session. As earlier described during the session the facilitator engaged with each group in order to discuss their progress. During these instances all participants described interesting and purposeful ideas, as well as clear intentions with regard to how these would be presented and communicated.
However, despite this none appeared comfortable or willing to present these to the class as a whole.

In relation to the presentations, students displayed none of the organisational skills so apparent in the earlier stages of the workshop, such as communicating during conceptualization and delegating duties during the creation of the Zeega. All required extensive questioning and prompting from the facilitator in order to illicit the ideas communicated so confidently at earlier stages during the session. With the exception of one group who appeared to have assembled a brief collection of points, none had prepared what they wished to convey about their piece.

This group too was exceptional in that they nominated a speaker. Despite advice offered by the facilitator that all groups should make a selection in this regard, this did not materialise. With the exception of that mentioned, all groups displayed confusion with regard to who should respond to questions from the facilitator and constantly deferred to one another. When a response was forthcoming this was addressed to the facilitator rather than the audience. Students’ public speaking skills were generally found to be deficient, with all articulacy and confidence perceived during discussions with individual groups absent at this stage.

A number of factors may have contributed to this. For example students may have misjudged their timing, spending too long on their Zeega and leaving insufficient time to prepare the presentation. However, it is interesting to note that when this was subsequently mentioned in passing to the teacher involved in the workshop’s organisation, she acknowledged that this was indeed a “quiet” group. She went on to remark that transition and fifth years were commonly less forthcoming and generally shier and more reserved compared to when they entered the school in first year.

Again a number of factors may be at play here. Yet a remark by Teacher B during the interview sessions offers an interesting insight into this phenomenon;

“you are kind of nurturing a relationship with them there the whole time, not just in the class, but outside, so they feel comfortable to talk and I have to say like in this school in general students wouldn’t be (encouraged to talk)”. 22

Together with the findings of the classroom observation, it appears that in a general sense students are not given the opportunity to form or develop these skills. The

22 Teacher B, The Ursuline College Sligo, Teacher Interviews 31 January 2014
insinuation by the organising teacher that students are in fact more proficient in such areas upon entry to the school than after four or five additional years of instruction is certainly noteworthy in this regard. Activities focused on the development of oral expression have been found to be largely absent throughout this research. There thus appears to be a notable correlation between the lack of opportunities to exercise such abilities and the decline of these skills as students progress through the system.

Although a direct causation cannot be established from the modest findings of this research, they do demonstrate a pattern worthy of further investigation. While lamentable in relation to the quality of educational experience, such a phenomenon may also indicate an unfortunate disjuncture between the various segments of the Irish education system which will be further discussed in Chapter Five. As such, this underlines the necessity for further research into the development of verbal skills and public speaking at second level as well as the potential role of digital storytelling in facilitating this process.

**Interpersonal Skills Development**

When we thus consider the challenges encountered by students in attempting to express themselves vocally, whether during discussions in existing classroom activities or when compelled to present their Zeegas during the workshop session, it is perhaps unsurprising that when required to work together to complete a prescribed task, students encounter some difficulties. The challenges described by students regarding group work could reflect a deficit in the social skills required for such a task. Therefore by compelling students to work together in its inception and creation, digital storytelling developed through group work could represent a significant response to such a deficit.

As previously noted consideration of linguistic and cultural differences is increasingly fundamental to social and working life. If such challenging skills are to be mastered basic proficiency in negotiating and communicating with one’s peers is necessary. Within a society increasingly demanding of flexibility it is essential that students be afforded the opportunity to develop these abilities if they are to participate fully in public, community and economic environments. Together with this, deficiencies in regard to such abilities pose significant implications for students’ engagement with and understanding of media and the cultural discourse. The findings of this study indicate promise for digital storytelling as an instrument for the development of such skills delineating it as an important area of further research.
A More Individual Focus
Despite the promising advantages of a group work approach, indicated by this study, there is certainly scope to investigate an application of digital storytelling with a greater focus on individual work. Undoubtedly the elimination of the group element would negate a number of the benefits associated with this approach as outlined above, as well as the occasion for students to develop the social and organisational skills required to navigate such situations. However, in focusing on the creation of individual digital stories students would be afforded greater scope to express their personal interpretations. Combined with a more extensive focus in regard to presentation and group discussion of these individual pieces, students would potentially benefit from rich exposure to the learning styles and experiences of their peers. Investigation into such an application while certainly warranted would therefore require significant consideration of the challenges observed in students with regard to public speaking.

Conclusion
At this point in the research it is clear that the structure of the syllabus and assessment in the form of the Leaving Certificate examination are not conducive to a holistic and enriching learning experience. The apparent disregard of the Leaving Certificate for skills such as critical thought, personal interpretation and oral discourse, as well as the value placed upon others such as the retention and reproduction of information, invites a number of questions. What is the purpose of such an exam? What does it reveal with regard to the cultural value placed on such skills? How has it been challenged by technological as well as social developments? In what manner do the findings of the digital storytelling workshop address this?

Through the facilitation of a digital storytelling workshop in the Irish second level context this research sought to explore the potential of digital storytelling in such an environment, particularly in relation to the study of narrative texts like Macbeth. In so doing it strove to inform the focus and direction of further research in this area. The challenges of implementing digital storytelling were central to this study. How might teachers acknowledge these in relation to their own approach as well as the specific needs of their students?

Further to this research a series of potential advantages regarding the implementation of digital storytelling in the Irish second level context were identified. Through challenging students to conceive of personal interpretations of their learning material, the process appeared to stimulate students to consider concepts
presented more deeply and in relation to their own personal experiences and background.

Utilising the creative possibilities of the digital environment appeared to be essentially intuitive for students involved here. This provided a powerful mode of expression, which they were keen to advance and develop as a fundamental skill. However, the creation of digital stories was not without its challenges. While offering numerous opportunities for creation, access to such a broad range of media possibilities proved distracting for some of the participants, necessitating greater intervention on the part of the teacher or facilitator. This could potentially present some difficulties for teachers, particularly when dealing with a large class of students, all with differing needs in this regard and is certainly an issue that future research in this area should remain cognisant of.

Access to the necessary facilities is also a key consideration. While in this instance the digital platform was found to offer a powerful tool for creative expression, it must be noted that in the majority of Irish schools computer resources are limited. While efforts are continuing to address this issue within the education system, presently the integration of such techniques into classroom activities would inevitably prove challenging (‘ICT in Schools: Inspectorate Evaluation Studies,’ 2008).

Despite its modesty in terms of scale, this study has indeed highlighted the potential of digital storytelling in extending and enriching students’ experience of narrative texts such as *Macbeth*. Perhaps most significantly it has affirmed the contention of the research thus far that meaningful reform will not be achieved through a generalised technological resource similar to those discussed in the literature review. Rather in striving to achieve such reform, we must envisage the role of technology in the creation of an environment in which students feel comfortable and stimulated to participate. The significance of group work observed throughout the session underlines the importance of relationships within such an environment and hence the necessity that any meaningful intervention strive to support and augment these. The next chapter will consider these findings in the relation to the broader cultural context and thus the extent of their significance in relation to the questions surrounding this research.
Chapter Five: Presentation and Discussion of Findings, Part 2

Theoretical Implications

The findings of the previous chapter provide an interesting and comprehensive insight into the experience of teachers and students engaged in the study of Macbeth, yet so too do they invite a number of questions with regard to the nature of the education system and its relationship with wider culture. In this chapter the implications of such findings will be discussed in line with the contentions of the literature review, along with a number of additional theoretical perspectives on the issues raised. In this way the everyday experience of students and teachers will be examined in a broader cultural context, giving full consideration to their theoretical significance as well as rooting such theory in lived experience.

The Otherness of Education

The Confines of Context

As noted in the previous chapter among both teachers and students engaged in the study of Macbeth there was a prevailing perception of Macbeth as a school text confined to the realm of academia. This attitude was divulged through a series of comments from students such as,

“I think it would be more of a school thing, but I wouldn’t mind having to go back to it.” (Student 14)23

While in general students displayed significant appreciation of Macbeth, for the majority this did not extend beyond the realm of the classroom. In the main students did not appear to have considered the possibility of broader consideration of the play or of Shakespeare in general. For most this appeared to be an experience which would remain within the confines of the Leaving Certificate.

The distinction with which Macbeth was held as an academic text recalls the research of Kansas University anthropologist Michael Wesch outlined in the literature review. Wesch explores this ‘otherness’ of the educational experience and the questions it poses with regard to the principal values and aims underlying our education system. Wesch contends that this growing distinction between education and broader cultural experience has led to a ‘crisis of significance’, whereby

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23 Student Interviews, The Ursuline College Sligo, 25th February 2013
students fail to see the relevance of their educational texts and are thus disinclined to engage with them (Wesch, 2008).

Certainly the attitudes expressed by students with regard to the study of *Macbeth* echo the contentions of Wesch, indeed this ‘crisis of significance’ would appear all the more acute in this instance, whereby even the consideration that *Macbeth* could or should bear any relevance to students beyond the school context is largely absent. Yet the prevalence of this perception among students is hardly surprising when we consider that such a contention appeared to be equally frequent among teachers. While teachers generally advocated the position of *Macbeth* in the curriculum, their expectations with regard to broadening students’ experience and appreciation were limited at best, with comments such as,

“(Macbeth is) relevant (to students) because it's on their course, that's as relevant as I’d say it would be”, (Teacher A)

“focus on exams… that’s always at the back of our minds" (Teacher D)

“I don’t think the majority are going to revisit that type of language and that type of world” (Teacher B)24

Rather the aspirations and expectations of teachers with regard to their students were generally confined to the context of the final exam and as such appeared to begin and end with the Leaving Certificate. While in some cases teachers were concerned by the limits of this process, the regularity with which assertions such as those mentioned above presented themselves would appear to suggest that the issue of relevance has gone beyond the point of a ‘crisis’ as Wesch put it and has arrived at a position of grudging acceptance. As such the divergence with which educational texts are perceived appears to have become an engrained and accepted characteristic of the learning experience.

**The Whole Verses the Sum of its Parts**

Contentions such as those described above reveal much with regard to the extent and depth of engagement with the text as well as the nature of the learning experience in a general sense. We learn in order that we become active participants in society as well as to realise the extent of our own potential. As such it is of vital

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24 Teacher Interviews, The Ursuline College, 31st January 2014
importance that learners perceive the relevance of individual learning activities in the context of their greater educational complex (Honebein et al., 2012). While in the case of both learners and educators engaged in the study of Macbeth this appears somewhat wanting, arguably this is merely symptomatic of an attitude that pervades the system as a whole.

The degree to which the experience of Macbeth is dominated and shaped by the Leaving Certificate exam is interesting when considered in relation to Sir Ken Robinson’s notion of the school as analogous to the factory. As described in the review of literature Robinson contends that our education system is not only designed to meet the imperatives of the Industrial Revolution, but is also modelled in its image. He describes institutions organised along factory lines, with separate facilities, ringing bells and isolated specialised subjects (‘RSA Animate’, 2010). Yet here we see the isolation not only of ‘subjects’ as delineated by the curriculum, but also the segmentation of the learning process as a whole. At this juncture in their education both teachers and students appear almost wholly focused on the Leaving Certificate exam. While to a certain extent it is acknowledged among teachers and students that this is a process that builds on what has come before, as exhibited through references to their Junior Certificate level, Shakespearean text (Romeo and Juliet), the limited expectations with regard to consideration beyond the confines of the exam as well as to ongoing development and enrichment signify that to a large extent this appears as an isolated block in the production line of education.

While the Leaving Certificate is perhaps the most extreme example of this in the Irish context, from primary level to Junior Certificate, Leaving Certificate and third level the education system as a whole appears dominated by isolated blocks. While certainly it must be acknowledged that such objectives are necessary in terms of assessment, as mentioned above it is vital that learners perceive the relevance of each elemental stage in relation to the broader educational complex (Honebein et al., 2012). Yet the rigidity with which such segments shape and inform the system often portends that consideration of education as a whole is somewhat limited. As such the tenuous continuity between each disparate stage not only poses a number of pertinent questions with regard to the purpose and values of the education system, but also presents a series of significant challenges for many students engaged within it.

One such challenge was brought to the fore in comment by Teacher C with relation to creative interpretation. In this regard the teacher noted that,
“I think third level will probably give them that if they chose to go on”

While the segmentation of education seems to have facilitated a situation whereby each section is more concerned with preparing students for successful completion of said segment so that they may progress to the next, as opposed to the consideration of a holistic educational experience, it is significant to note that even in this regard the systemic aspirations appear somewhat wanting. While Teacher C may consider skills of creative interpretation as belonging to the realm of third level, it has been continually noted by third level educators that these are essential and expected skills for any undergraduate student (‘Joint Committee on Education and Skills: Third Level Curricular Reform,’ 2011).

Yet analytical and critical thinking skills cannot be developed overnight, but rather take many years of honing and development. The lack of emphasis on such skills leaves many undergraduates unprepared for the demands of third level. This necessitates a significant re-evaluation on the part of the student as regards what is of value in relation to their work, from retention and reproduction of information to creativity and analytical engagement. This disconnect between the values of second and third level education while posing significant questions with regard to the structure of our education system as a whole, has also been cited as a major contributor to undergraduate drop-out rates (Redmond et al., 2011).

**The Divergence of Macbeth**

**Passivity and Hierarchy**

The divergence with which *Macbeth* is perceived as an educational text is perhaps unsurprising when we consider the process of studying the play. Here too we see great affinity with the contentions of Wesch, who has noted the increasingly atypical experience of the classroom. As Wesch outlines the prevailing practice in education whereby analysis is largely teacher centred, is structurally hierarchical. Certainly such an approach whereby teachers convey information to students who passively absorb it has been observed in this research. Indeed this hierarchy permeates not only the approach to the text, but can also be observed in the very layout of the classroom environment itself, with rows of student desks facing the primary source of information, the teacher. As Wesch notes difficulties arise in that by its very nature such practice makes the assumption that information is rare and difficult to find, an assumption increasingly out of step with the real world experience of

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25 Teacher Interviews, The Ursuline College Sligo, 31st January 2014

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students. We live in a world where information is not only available, but instantly so (Wesch, 2014). This presents significant challenges to an educational system that places such value on the retention and reproduction of information. The inherent otherness of this environment means that even before approaching the text, it is associated with an experience that is somewhat alien to broader culture.

In this regard it is particularly interesting to consider the fluidity of place in digital society as described by Donna Haraway in *The Cyborg Manifesto*. Though place is crucial in the way it constrains the stories that are told or could be told, in the digital era Haraway envisages a discourse more concerned with connections than isolated components (2010). Yet while the boundaries defining previously distinct areas of life such as the workplace, the home and the market have become blurred in the technological era, the category of education (particularly at second level) remains distinctly defined. This likely has the effect of solidifying the position of texts such as *Macbeth* firmly within the educational context, inhibiting association and collaboration with broader cultural experience.

**Peer Insights**

Limitations presented by this prevailing hierarchical process exemplified in the proliferation of ‘teacher talk’ and dictation, were thrown into sharp relief by instances where the teacher in question dispensed with this approach in favour of engaged debate, classroom discussion and creative questioning. As has been noted in the previous chapter in instances such as these students appeared animated and stimulated to participate. This had the effect of emphasising the classroom as a social environment. Drawing students to interact around a text in this way has a number of significant benefits. It has been noted that as individual learners, others represent the most important mechanism for testing personal understanding as well as facilitating exposure to and examination of alternative viewpoints. In this way others are the greatest source of differing attitudes that in turn challenge that of the individual and create a sense of confusion that stimulates learning (von Glaserfeld, 1998).

Through such interaction the classroom becomes an important environment for connection. As Bruner noted the sharing of narrative structures has a fundamental role in the creation of community and thus a common understanding of experience. The way we structure our stories is not fixed, but heavily influenced by cultural, linguistic and interpersonal factors. As such the cognitive and vernacular systems of our culture shape the stories we tell as well as defining the stories that can be told (2004). Therefore the narrative forms that emerge as a result of these
processes mould perceptual experience, the coordination of memory, the comprehension and organisation of life events. It thus follows that in facilitating interaction between students while they are engaged in the study of Macbeth, their consideration of the play begins to be understood through the language and narrative structures inherent to them. In this way it is likely that Macbeth could enter the world of the students to a greater extent, becoming more meaningful for them in terms of its reflection and provocation of their own experience. As such they are offered the potential to gain an increased sense of ownership of the play. There is thus greater possibility for a larger variety of conversations surrounding the text to occur as well as greater contemplation in relation to the broader experience of students. In this way the text itself in turn becomes more meaningful inviting more questions and further contemplation of its content.

**The Dissemination of Categorical Thought**

**Finality**

As noted in the previous chapter the categorical nature of the study of Macbeth was found to have considerable influence with regard to students’ experience and perception of the play. The creation and utilisation of categories is an important part of learning. As Bruner noted we are drawn to describe the world around us and subsequently seek to emulate the image we create (2004). Yet an overreliance on such categories can be limiting. Problems can arise when the fact that these are simply constructs is lost sight of (Langer, 2010). For Haraway such delineations represent the artificial manner in which humans are drawn to create and organise their lives. Describing, “the deepened dualisms of mind and body, animal and machine, idealism and materialism” by which contemporary culture is defined, Haraway explores the way in which such a reliance may cause us to become trapped by the rigidity of our own creation, leading to an illusion of one-ness that must isolate the ‘other’ (2010).

From an educational perspective the contentions of Haraway are interesting when considered in line with the work of Ken Robinson and in particular his arguments with regard to the predominance of standardised testing. For Robinson the growth of standardised testing is symptomatic of a push within our education system towards a model of conformity that is only worsening with time (‘RSA Animate’, 2010). This growing reliance on a structure of rigidity would appear to be much affiliated with the contentions of Haraway and demonstrates the degree to which we have come to depend on such engrained structures and dualisms as inherent elements of our assessment frame work. Yet while Robinson’s contentions
illustrate our reliance on categories and standardisation in order to rate and measure learning, the findings of the previous chapter appear to indicate the degree to which this has become a significant factor with regard to the manner in which the process of learning itself is structured and organised.

As previously noted the level to which students and teachers displayed a reliance on a number of predefined categories appeared to create significant limitations with regard to students’ creative engagement with and indeed comprehension of the play. This approach whereby students consider the play through the distinct and regimented categories of themes, characters, language imagery and the plot itself appeared to instil a somewhat disjointed understanding of the play. There was a persistent perception that each of these elements could be completed in relative isolation before progressing to the next, with no real sense of how they related to one another or their significance in the context of the play as a whole. This appeared to imbue a sense of finality among students, many of whom reported difficulties when required to step outside of such categories or to compare them to one another.

While certainly this raises questions with regard to the quality of interaction such an approach facilitates in relation to the play itself, so too does it present implications for the position of *Macbeth* in the curriculum and its perception among students. The dissection of the play’s analysis into the categories outlined above created a series of targets for students and teachers to complete throughout the process of study. The degree to which the curriculum necessitated that class groups strive towards the completion of these targets appeared to result in a mentality of distinction. While these pertained to the prescribed categories for the study of *Macbeth*, so too did it inform the consideration of the play as a whole. As such students appeared to perceive *Macbeth* as an isolated task, with little consideration of its relevance within the curriculum as a whole or how it might relate to other elements of the course. Thus this process would appear symptomatic of the segmentation that permeates the education system in a general sense and is particularly evident in the case of the Leaving Certificate exam. While it is therefore likely that this approach contributes to the distinction with which *Macbeth* is held as an academic work, with little perceived relevance for students, so too would it appear that such a method inhibits the consideration of *Macbeth* in an overall academic context, limiting its discernible relevance in relation to the curriculum itself.
**Categories and ‘Mindlessness’**

However, as has been earlier noted categories are an important part of how we organise and make sense of the world. Indeed the creation of categories is a purposeful, creative and mindful activity, yet work by the psychologist Ellen Langer has indicated that a slavish dependence on said categories can facilitate a degree of ‘mindlessness’ (2010). This is interesting when considered in relation to the study of *Macbeth*. The division of the play’s analysis into a categorical structure, while providing a degree of clarity removes the onus of creation from the students. As such in the case of *Macbeth* students do not partake in this process of meaning making, instead this is provided for them and absorbed with a high degree of passivity.

While such an approach clearly presents a number of limitations in inspiring meaningful and innovative engagement with *Macbeth*, we must also consider the possible implications for the learning experience as a whole. A potential consequence of particular note in this regard could occur due to the fact that engendering such a dependence on existing structures in students may leave them less open to new possibilities. This phenomenon has been explored in the work of Robinson with regard to the development of divergent thinking (the ability to see many possible answers to a question) among students. As described in the literature review when tested at kindergarten level 98% of participants were found to have genius levels of divergent thinking ability, however when tested again at five year intervals this was found to have decreased cumulatively the longer students participated in formal education. While Robinson did note that there were a number of variables and possible influencing factors present in the lives of the participating children during this period, by far the most prevalent was that they had become educated. Considering this it seems likely that while appearing indifferent to the development of creativity, the categorical approach utilised in relation to *Macbeth* may indeed have the effect of stagnating such skills (‘RSA Animate’, 2010).

As such we must consider what consequences the propagation of this attitude might have beyond the classroom. It is the contention of Langer that an over-reliance on categories and the ‘mindlessness’ that may occur as a result, leads people to treat information as though it were context free and thus true regardless of circumstance (2010). While the disregard for context would certainly present barriers when considering the elements of *Macbeth* and their significance over and above the bounds of the curriculum, the engendering of such a mind-set could also result in a lack of awareness with regard to the nuances of context in a more general sense and perspective in relation to our own actions. As such students may
be ill equipped to construct their own categories and distinctions, particularly when presented with novel situations.

While this undoubtedly has consequences for students in an educational context, if we consider the earlier contention that we learn in order to function more effectively in the world, questions arise as to what degree such an approach can hope to assist students in this regard? While structures are actively implemented and facilitated in education, as Haraway notes in a general sense categories such as these are less and less relevant in the digital era. She utilises the allegory of the cyborg to illustrate this blurring of boundaries so deeply engrained in the human consciousness (2010). While Haraway encourages pleasure in the confusion of boundaries, categorizing is a fundamental human activity. Our inherent desire to clarify and describe the world around us means it is unlikely that the dissolution of such structures will result in a categorical vacuum. Rather it is probable that the ambiguity imbued in the technological age will necessitate the active and iterative construction of new categories with due consideration of context as well as empathy for the perspectives of others.

A Homogenous Perspective

While a persistent reliance on existing categories in education would certainly raise questions with regard to how students will be equipped to undertake this, so too does it draw us to consider its implications for one of the most significant challenges facing contemporary education; How can we sustain a sense of cultural identity while at the same time participating in the globalised economy (‘RSA Animate’, 2010)? Regardless of ethnic or cultural background if people are taught the same way they will likely think and approach problems in the same way. Therefore despite the fact that the ethnicity of the Irish student populace is becoming increasingly diverse (Byrne et al., 2009), a persistent reliance on a structure of rigidity such as that which has been described to this point will likely result in increasing homogeneity (Langer and Moldoveanu, 2000).

In the case of the study of Macbeth this phenomenon of uniformity presented itself in a number of instances. There was a persistent view of Macbeth as a good man turned wholly to evil. As such students often displayed little empathy for the humanity of the character or consideration for the context of Macbeth’s tragedy. The homogeneity of this black and white view, was demonstrated in a class discussion during which students were asked to what degree they felt Macbeth was responsible for the events of the play. As noted in the previous chapter students were unanimous and steadfast in their belief that Macbeth was wholly responsible
for what occurred. Despite numerous attempts by the teacher to venture a counter argument, students appeared unwilling to acknowledge or entertain an alternative view. Similarly during interview sessions it was noted by one student that it was typical for class groups to come to a collective consensus in this way, from which it was then difficult to deviate.

Such an approach inevitably presents limitations with regard to students’ ability to assess and compare a variety of views, thus the quality of their analyses of Macbeth. However, the instilling of this homogenised mentality also raises questions with regard to tolerance and prejudice. While the notion that there is one answer to a question is indeed simplistic in the context of academia, in a broader societal framework the view that alternative behaviours, responses and perspectives are implicitly or explicitly inferior is limiting and potentially destructive. Through a passive reliance on existing categories we are likely to disregard new, incoming information or evidence (much like the students during the class discussion). Rather than actively creating loose, interpretive categories informed by context, such an approach is unyielding, closed to enquiry or inspiration (Langer and Moldoveanu, 2000). This teaching method thus may have significant consequences for students’ ability to effectively communicate with others, particularly those whose cultural frame of reference differs from their own. As such there is a risk not only of a failure to avail of the benefits of alternative viewpoints and perspectives, but the adoption of a prejudiced, intolerant mentality (Langer, 2014). It is thus likely that rote learning dependent on a rigid, categorical structure may have the effect of instilling a closed-minded, incurious mentality.

**Storytelling and the Dissolution of Categories**

**Fluidity in Macbeth**

The consideration of Macbeth through such a categorical structure is perhaps particularly inappropriate when we consider the destruction of structure at the very heart of the play. As noted in the literature review with the murder of Duncan, Macbeth steps outside the defined social order and as such becomes placeless, undefined and thus dangerous. One of the play’s most powerful images, that of the unborn child, neither of this world nor the next, both innocent and dreadful appears to underline this threatening ambiguity. Macbeth himself is haunted by the image, be it the, ‘birth-strangled babe’, the line of unborn kings of Scotland or the ‘bloody child’. Indeed it is MacDuff’s status as an infant not of ‘of woman born’ that allows him to defeat Macbeth (O’Toole, 2002).
Throughout the play the most basic antitheses of good/bad, dead/alive, man/woman become blurred. In *Macbeth* there is always a third option. The dead refuse to stay dead, the question of what it is to be a man is asked again and again and must be continually redefined. As noted in the literature review this ambiguity is personified by the Witches. Neither male nor female, they themselves defy classification and serve to confuse boundaries throughout the play. At various stages their words and actions draw us to speculate but never conclude the degree to which they control characters and events, if they are fact or mere manifestations of a shared desire of Macbeth and Banquo (O'Toole, 2002). While such questions present challenges for the contemporary viewer, this type of conceptual thinking is very much a product of late stage literacy. Rather than preformed contextual categories the Shakespearean audience was more heavily informed by their experience in the moment as such it was likely easier for the Witches to be accepted as neither male nor female, but simply something other (Ong, 2013).

Such ambiguity speaks to the fluidity of categories typical of a more orally informed culture. As noted in the literature review for theorists such as Thomas Pettitt the growth of digital technology and subsequent breakdown of categories represents a return to normality of sorts after a period of print dominance he terms ‘The Gutenberg Parenthesis’. It is the contention of Pettitt that the predominance of categorical thinking is rooted in print culture. He notes that while language was spatially confined as words on a page, thought processes were confined by strict categories and abstract concepts such as nations, race and belief, less fundamental in the oral tradition (Metcalfe, Paradis and Pettitt, 2010).

**Narrative Complexity**

While *Macbeth*’s roots in a culture of orality can be discerned in its form and structure, similarly the growth of digital culture has begun to influence contemporary story forms. In his article *Narrative Complexity in Contemporary American Television* the media scholar Jason Mittel contends that in the past two decades American television series in particular have begun to move away from the norms of episodic closure, towards what he terms ‘narrative complexity’. Rather than self-contained episodes such series typically have a broad narrative arc spanning an entire (or even several) seasons. At the same time they capitalize on the serial format emphasising continual serial narration over episodically contained plots (Mittel, 2006). As such these shows tend to amass a complicated web of backstories and character relationships. This ‘narrative complexity’, can be identified

It is interesting to consider the relationship between such narrative forms and the growth of digital culture. Indeed one could speculate that the nature of this form of storytelling is a reflection of the way in which we consume information online. While the print reader accumulates knowledge sequentially, content at every stage serving as a foundation for what is to come, online information acquisition is commonly less linear. Frequently a minute fragment of information can draw the user to expand and explore a topic in depth. As a result comprehension is developed through a series of detailed asides.

‘Narrative Complexity’ is also interesting when considered in relation to Pettitt’s concept of The Gutenberg Parenthesis and a return to oral thought processes (Metcalf, Paradis and Pettitt, 2010). Whereas the print novel has accustomed the modern reader to focus on one character in particular, narratively complex shows frequently draw the viewer to consider the primary story arc from the perspective of a number of characters. By exploring the core narrative in this way, through a series of episodically contained plots, such shows are in many ways more reminiscent of the Epic Pattern. The Epic Pattern consists of a series of fables that create a whole. This type of structure is primarily associated with oral storytelling exemplified in *The Odyssey* or *Beowulf* (Barthes and Heath, 2009). Yet it could be ventured that narratively complex shows have evolved both structures. The multiple perspectives and contained episodic plots serve not only to inform the events of the story, but enrich the viewer’s perception of the characters. It could therefore be argued that using the Epic Pattern and the diffuse concepts developed through print the audience is drawn to engage with multiple characters as fully developed psyche in a way that a linear narrative could not facilitate.

For Mittel the growth of this narrative form is a reflection of the advance of Web 2.0 technologies. As such viewers have the ability to embrace a ‘collective intelligence’ for information, discussion and interpretation of complex narratives, inviting active engagement (Mittel, 2006). In a manner that could be compared to the qualities of the Shakespearean audience and their perception of the Witches earlier discussed, such viewers become ‘amateur narratologists’, constructing meaning in the moment of experience. This concept of a shared social experience around narrative is also interesting when considered in relation to the contentions of Pettitt.

As noted in the literature review in pre-print culture communal appreciation of narrative formed an important social function. Typically one individual would read
aloud to a group facilitating discussion and debate around the text in question. The rapid, silent reading facilitated by print together with the availability of small portable books made for an entirely more solitary experience (Ong, 2013). However in the ‘narratively complex’ television series the story is segmented into a series of episodes, the audience is thus able to discuss the unfolding story, to share opinions of characters and speculate as regards what is to come. In this way the narrative experience has many similarities to that of oral storytelling. This segmentation combined with public, online opinion sharing, offers creators the opportunity to gauge public reaction as a story progresses. Through fan pages and social networking sites, audience members can actively voice their feelings on the narrative perhaps indirectly influencing its development, but certainly generating a markedly contrasting relationship between creator and audience to that typical of the print era.

Ambiguity
In investigating the degree to which Pettitt’s Gutenberg Parenthesis and a return to more orally informed thought processes may be reflected in contemporary story forms, it is also interesting to consider the concept of ambiguity. In relation to ‘narratively complex’ series this is most strikingly embodied in their depiction of unreliable, multifaceted and morally ambiguous central characters. This growing trend is exemplified in roles such as Homeland’s Carrie Mathison (2011), Top of The Lake’s Robin Griffin (2013), Breaking Bad’s Walter White (2008) or True Detective’s Rust Cohle (2014). These characters aren’t confined by traditional categories or stereotypes, displaying an ability to move between them. Their fluid representation serves to confuse traditional boundaries in the mind of the viewer such as good/bad, strength/ vulnerability, truth and fiction.

In doing so arguably they portray a complex humanity with a greater degree of veracity in relation to lived experience. Indeed the fluid portrayal of these characters is more akin to the complex, human frailty of Macbeth and other Shakespearean anti-heroes such as Othello, Lear and Hamlet. In a similar manner the viewer is drawn to identify with the characters of these shows to a degree that renders their transgression all the more meaningful. At the same time their untrustworthiness blurs boundaries of truth and fiction while their moral ambiguity means the audience is never sure with whom to lay their sympathy or allegiance.

Therefore it is indeed possible that the prevalence of such qualities, seen in the characters of shows like Breaking Bad and Homeland could be read as manifestations of Thomas Pettitt’s Gutenberg Parenthesis and a return to more
orally informed thought processes. It might then be surmised that while a move away from the rigid structure favoured by the Leaving Certificate may indeed represent a more appropriate reflection of contemporary culture and society, so too might it be more in tune with the nature of *Macbeth* as a work.

The confusion of boundaries explored in the work of Haraway and Pettitt can also be observed in relation to media themselves. The page and the stage have been dissolved into the screen (Shaughnessy, 2007). While ‘old media’ such as theatre, concert, film and print continue to exist alongside the digital, the screen is steadily becoming the primary mode of consumption. Once entirely distinct experiences, baring individual expectations regarding the physical, social and sensual are now not only broadly similar, but can be experienced simultaneously. While this certainly has implications for categories of experience and creation, so too does it ask us to consider the boundary between fact and fiction.

A possible consequence of this in relation to narrative is the growth of factual fiction writing. Though certainly this mode of writing has roots far preceding the digital era, in recent times such novels have seen a notable surge in popularity. This is a trend that may be understood to be reflected in the prevalence of such work among winners and shortlist candidates of The Man Booker Prize. The Man Booker Prize is an interesting indicator of the market place due to the degree to which it drives popular taste as well as marketing weight. Success in the competition virtually guarantees both international rights and local sales. Prior to Hilary Mantel's 2009 win for *Wolf Hall*, the novel had not secured a single foreign right, being considered too long by most publishers. Within moments of the announcement of *Wolf Hall's* achievement, multiple offers for the book began to flood in. Such influence is not confined to winners. Prior to its shortlisting *The Sisters Brothers* by Patrick deWitt had a mere 1,300 copies in circulation, this subsequently rose to 60,000 ('School Of Advanced Study, Novel Approaches', 2011).

It is thus interesting to note that while previously having little impact, in recent years factual novels have begun to fill the lists of Booker Prize nominees (' 'School Of Advanced Study, Novel Approaches', 2011). Since 2008 fictional accounts of real life characters and events have featured on every shortlist, winning the prize on two occasions during this time period. These were both penned by Hilary Mantel, *Wolf Hall* in 2009 and *Bringing up the Bodies* in 2012. Indeed in 2009 the entire shortlist comprised fictional interpretation of fact, with half the list being made up of such works in 2012 ('The Man Booker Prizes,' n.d.). However the boom in the factual novel is not confined to heavy-weight prize winners such as Mantel or Andrew Miller. The trend can also be observed in the more populist works of CJ
Sansom or in particular Philippa Gregory. The author of several bestselling novels, the most prominent being *The Other Boleyn Girl*, Gregory is arguably the most popular writer in the genre having sold over 2,577,235 volumes (MacArthur, 2009).

This merger of fact and fiction is not limited to the literary arena. In the world of film too the interplay between fact and fiction has become a vehicle for prestige projects, often synonymous with award accolades and their subsequent market benefits. In a manner similar to the Man Booker Prize, the film Industry’s most publicised distinction, The American Academy Awards is an interesting indicator of the rise of film based on fact. Since 2008 such films have featured prominently on every list of nominees for best picture, with four winning the award during this time period, *The Hurt Locker* (Bigelow, 2009), *The King’s Speech* (Hooper, 2010), *Argo* (Affleck, 2012) and *12 Years a Slave* (McQueen, 2013). This trend was particularly notable in 2013 where all but three of the nine nominees had there basis in fact ('The 88th Academy Awards|2016,' n.d.)

As is the case in the literary world, the biopic or film based on fact is by no means new to the realm of cinema. Yet the degree to which its prominence has increased in recent years is notable. While a series of factors are likely at play in relation to the increased popularity of such work, it is interesting to speculate that this trend may be indicative of a growing acceptance of ambiguity among the general public. Whereas in the age of print perceptions of fact and fiction were greatly informed by marked differences in context and presentation, in the digital world they lie side by side and are frequently interchangeable. Considering such a concept an interesting example with regard to how this ambiguity may have begun to influence narrative forms presents itself in the rise in popularity of the documentary film.

In his article *Extreme Makeover: The Changing Face of Documentary*, Paul Arthur describes the shift in the role and esteem of documentary. In the years 1996 to 2003 documentary releases to the domestic US market averaged fifteen a year, with these generally receiving a limited release. In 2003 the number of documentary releases almost tripled, climbing to fifty in 2004 and making up roughly ten percent of total film releases. Of these nine broke the million dollar mark, compared to an average of four in previous years, with Michael Moore’s *Farenheit 9/11* firmly in the top spot (2005).

Arthur contends that the growth in popularity of the documentary has developed against a backdrop of radicalized public feeling, he argues that in the wake of 9/11, under threat of terrorism and a climate of intensified corporate influence, people began to question leaders, to speak out against war and economic
injustice. Interestingly he notes that this desire for engagement and truth has coincided with a shift in the language of the documentary, a move away from educational Griersonian ideals towards forms more traditionally associated with fiction film (2005). Manipulation of chronology, application of mood music, liberal use of slow motion and other optical printing devices and a growing trend for re-enactment of events not caught on camera are forming a hybridised film language, more concerned with suspense, character identification and climactic action, than factual argument (McDonald, 2007).

The release of Moore’s *Bowling For Columbine* and *Fareheit 9/11* in particular marked a broad change in the public perception of the documentary and yet Michael Moore himself disavows the term documentary opting instead for the morally neutral term ‘factual entertainment’. The increasingly permeable boundary between fact and fiction appears to have been generally accepted by audiences and critics alike, legitimising this stylistic overlap. The situation is complicated further by a growing genre of hybrid films such as *American Splendor* and *Paradox Lake* that merge scripted and non-scripted scenes, seeking to create genuine social representations through the utilisation of real-life social environments (Arthur, 2005).

While perhaps arguable, Arthur’s contentions raise interesting questions regarding perceptions of fact and fiction. In light of such speculation it could be ventured that in an age of boundless information, the role of the story is more crucial than ever in attempting to clarify the vast and complex cultural and societal networks, now so tangible. What appears to be undeniable is that narrative forms as well as expectations with regard to narrative are evolving to reflect changing cultural values. What are the consequences for perceptions of reality? How can education systems hope to prepare students to discern truth and fiction in such a world, when acknowledgement of such ambiguity is so notably absent within existing learning structures?

**Competency in Obscurity**

It appears that while narrative continues to evolve, absorbing and reflecting cultural changes, emerging story forms such as those mentioned above, have in many ways been imbued with a number characteristics associated with pre-literate styles. Arguably these narratives generate experiences more in tune with the traditions in which *Macbeth* was conceived than that of the traditional, educational approach observed in the previous chapter. Despite this education remains largely insulated to such change. This appears unfortunate considering the ‘otherness’ with which *Macbeth* is perceived, hence the missed opportunities for possible connections and
the enhanced engagement these could facilitate. Yet the degree to which education continues to embody the values of print, exemplified in a dependence on categorical thought and a preoccupation with information retention, raises even greater questions regarding the appropriateness of this system. How can such an approach equip students to participate in this world of increasing ambiguity?

In the online environment redefining your identity, creating an entirely new identity is easily achievable. In such a context the categories on which students are trained to depend are less and less meaningful. Attempting to comprehend the digital world in such terms creates a series of issues. The findings of the report on children’s online activity EU Kids Online are indicative of this. The report found that children engage in a number of activities online that allow them to experiment with identity, relationships and intimacy. Although a vital part of growing up such experimentation is associated with vulnerability as well as resilience.

The report found that while 40% of 9-16 year olds questioned had looked for new friends on the internet, 34% admitted adding people to their friends list whom they had never met, a further 16% had sent personal information to people they had never met face-to-face (Livingston and Haddon, 2011). Together with this it was found that in a general sense the majority of participants lacked the necessary skills to assess the veracity of information found on websites, to manage privacy settings, to block unwanted messages along with a range of other commonplace online activities. Interestingly in the context of the study Irish participants were found to be particularly deficient in such skills. Possessing an average of just four out of eight named skills, deemed necessary for safe and effective online activity, they were found to be among the bottom 28% of participating countries (Livingston and Haddon, 2011).

It was noted that in an offline context, children and young people generally had a good grasp of the ethical codes of courtesy, consideration and care that guide social interaction, however they had much more to learn with regard to the importance of such codes online (Livingston and Haddon, 2011). These findings appear to indicate significant deficiencies in relation to digital literacy and online skills training, yet so too do they suggest an inability to comprehend the nature of the online environment and propensity to assess it in terms of broadcast or analogue culture. They would thus seem to indicate that in the digital realm children and young people persist in their reliance on traditional categories of truth and fiction, public and private. This is unsurprising due to the fact that little they have encountered in their education would lead them to presume otherwise. Yet as has
been previously noted the skills to interrogate and re-evaluate such categories are paramount in the digital realm and increasingly in society in general.

While the survey noted the prevalence of societal calls for restriction and supervision in response to children’s increased exposure to risk online, this was felt to be entirely simplistic. Though the survey did indeed find that for most participants, increased online activity was associated with increased exposure to risk, children with a higher level of digital literacy were found to be less upset by these ‘risky’ encounters. As more use leads to more skills there is a balance to be found here. With the appropriate skills, online activity can offer children opportunities for creativity that parents and teachers don’t necessarily appreciate. While required to a certain extent, the restriction of such online engagement limits access to opportunity as well as risk. Moreover, it must be acknowledged that as in the offline environment children must explore and encounter a certain amount of risk in order to gain resilience (Livingston and Haddon, 2011).

Together with this the increased prevalence of mobile devices as well as the growth of available online access in a general sense, have rendered the commonplace approach of locating the computer within the living-room or another communal space, to a large extent obsolete. In themselves both of these approaches indicate an attempt to comprehend the online environment in terms of traditional physical and geographical boundaries. As already discussed such strategies present numerous limitations. It is therefore essential that teachers and guardians engage with children on this matter and keep the lines of communication open as regards their online endeavours, aiding their understanding of the nature of the online environment as well as providing education in relation to appropriate and effective activity. In this way children may be empowered to engage creatively in the online environment as well as negotiate and contend with its possible risks, making for an entirely more appropriate response (Livingston and Haddon, 2011).

**Print is Paramount – The role of Performative and Oral Arts in the Curriculum**

While the mark of print culture appears to persist in the theoretical engagement and consideration of *Macbeth*, more overt, but equally worthy of note, is the physical presence of print in the classroom, as the dominant medium during study. Throughout interview sessions students were found to possess a notable appreciation for *Macbeth* as a literary work. The association popular among students of the play as a work of literature first and foremost is to a large degree in line with the contentions of Johnson outlined in the literature review. Students commonly referred to the evocative, descriptive and narrative passages of the play
and the manner in which these brought the events of *Macbeth* to life in the mind of the reader. For Johnson such passages were entirely antithetical to the nature of drama (Tomarken, 2009), similarly for the theorist A. C. Bradley this was evidence of the inherent textuality of the play. Like many of the students Bradley felt that this rendered the play entirely suitable for reading, indeed it was his contention that due to the vivacity of the prose, reading the play was in no way inferior to experiencing a performance (Bradley, 2010).

Curricular Engagement
While *Macbeth*’s status as a literary work is long established, the degree to which student’s understanding of the play first and foremost as a printed text, is informed by the manner in which it is presented to them in-class cannot be overlooked. Though a variety of media forms are visited throughout the study of *Macbeth*, the presentation of the printed text as the primary experience of the play, denies the inherent performativity of *Macbeth* as a work. The enduring authority of the printed text is interesting and perhaps speaks to the degree to which our education system is enthralled to literacy. As such it invites a number of questions with regard to the role and value of oral and performative art forms in education.

The majority of students entering second-level education will have had some experience of drama during their primary school years. Process drama was introduced to the primary level curriculum in 1999. This programme seeks to explore feelings, knowledge and ideas leading to understanding through the medium of drama. Upon entering second level for most students, theatre or drama are not available as subjects in their own right, yet there are a number of disparate opportunities to engage with such forms of expression. An example of this is during the transition year programme whereby schools are encouraged to

“Develop an awareness and appreciation of visual art, music, dance, drama, photography etc. Critical reading, viewing, listening and exposure to the living arts are worth promoting (‘Transition Year Programme – Guidelines for Schools.‘ 1994).”

To this end schools are given the option to offer and develop drama or theatre modules as part of their transition year units. This framework is mirrored in the new Junior Certificate programme, which was introduced in 2014. In line with this the new junior cycle syllabus will give schools and partner organisations the option to develop a range of short courses in a variety of areas including drama. Similarly The
National Council for Curriculum Assessment (NCCA) is to introduce a number of exemplary short courses which schools can choose to deliver, including a course in artistic performance.

However, on entering senior cycle such opportunities are even less prolific. Although The Leaving Certificate Applied Programme\(^{26}\) offers arts education modules including drama, at present theatre and drama remain notably under-represented in the Established Leaving Certificate programme, pursued by the majority of the student populace. The absence of the option of theatre/drama as a subject in its own right for most students at any stage during second level has been identified as a particularly notable drawback in the Irish education system by a range of stakeholders in the arts and education sectors (Ni Bhriain, 2012).

In a general sense the only opportunity for engagement with drama in the case of the majority of students during their senior cycle career is through their English and Irish syllabus prescribed texts. Dramatic works occurring in the English syllabus can be studied both as a single (as in the case of \textit{Macbeth}) or comparative texts. While all Higher Level students must study a Shakespearean play, a choice of two (a single and comparative text option) is offered. The course also consists of a variety of other playwrights including Irish authors. These are presented alongside a range of options including novels and films, which are then selected by individual teachers. The combination in which texts appear in their lesson plan is at the discretion of the teacher themselves. As such there is no one text that students must study (Ni Bhriain, 2012).

While the limited degree to which drama and theatre are facilitated at second level (particularly in the senior cycle) raises a number of questions with regard to the value of performative and oral art forms within education, the apparent disregard for such works and experiences is somewhat puzzling when we consider the value apportioned by the NCCA to drama at primary level. In \textit{The Arts Education Teacher Guidelines} drawn up by the NCCA it was noted that drama education constituted a unique way of learning and should therefore be considered an indispensable part of a child’s schooling. In order to illustrate this, a number of advantages to the experience of drama were outlined. Perhaps the most notable of these were, the promotion of empathy, the fostering of creativity, offering a rich oral language.

\(^{26}\) The Leaving Certificate Applied is a two-year programme designed for those students who do not wish to proceed directly to higher education or for those whose needs, aptitudes and learning styles are not fully catered for by the other two Leaving Certificate programmes (Established and Vocational). Participants in the Leaving Certificate Applied are mainly engaged in work and study of an active, practical and learner-centred nature. (NCCA)
experience, allowing the child to see patterns and unity between seemingly disparate subjects and creating an interest that can spur the student to research. Indeed the facilitation of such skills in young learners is highly admirable and would appear fundamental to an extensive and benevolent learning experience (The NCCA Teacher Guidelines For Drama Education, 1999). These skills are particularly worthy of interest as it has been noted previously that they cannot presently be seen to be facilitated or adequately developed through the current Leaving Certificate curriculum. Such notable absence raises a number of questions with regard to the appropriateness of the senior cycle approach. If such aspirations do not underpin the Leaving Certificate curriculum, what does? What abilities or qualities does it strive to develop and instil in students?

While the role of drama in the Leaving Certificate curriculum is as such rather limited there are a number of crossovers in what the NCCA terms as key skills which are expected to be integrated across the curriculum and those which young people may acquire by participating in theatre. Among these are the ability to think critically and creatively, communicating, information processing, being personally effective and working with others (Ni Bhriain, 2012). Yet as has been noted in the previous chapter nowhere in the six hour and ten minute final, written examination are these skills adequately assessed. As such there is no impetus for students or teachers to explore these attributes throughout their study. In the cumbersome curriculum there is no place for their development.

An Auxiliary Activity

It would therefore appear that while objectives such as those mentioned above seem to indicate that rich engagement with theatre is compatible with the second level curriculum, in practice this does not appear to be the case. The disjuncture between the outlined aspirations of the NCCA and what is in reality enabled and reinforced by the structure of the curriculum is further demonstrated by the fact that though it is recommended by the Department of Education and Skills that students’ experience a performance of their chosen theatrical works, the facilitation of such an experience is not compulsory (Ni Bhriain, 2012). While it appears that the benefits of these experiences are recognised and acknowledged, the practical supports required to implement them do not exist. As such the most desirable scenario whereby schools might avail of a rich, ongoing engagement with the arts community is not possible, instead these encounters occur on a merely ad hoc basis and are dependent on the initiative of individual schools and teachers (Ni Bhriain, 2012). It is
therefore unsurprising that engagement with theatre is considered a positive, but auxiliary activity rather than an essential and integral element of the curriculum.

The degree to which such experiences are perceived as external to the general school practice of studying prescribed texts was underlined by an Arts Council survey of young people who were heavily involved in youth theatre and drama groups in their own leisure time. Participants saw very little correlation between these experiences and their in-class exploration of dramatic texts. While participants described their involvement in youth theatre as positive and enjoyable, ultimately for such students, experience of theatre in the context of the curriculum was dependent on the approach and attitude of their teacher. Despite their evident personal interest in drama these students would be unlikely for example to put their ‘heart and soul’ into reading a passage aloud in-class if no one else was interested in this approach. While these students desired a rich and rewarding experience of the arts, obtaining maximum points in the Leaving Certificate remained a priority. It appeared that for these participants there was not necessarily an apparent interaction between the two. This was reflected in the response of one student who noted that despite acknowledging the value of such opportunities...

“At the end of the day, I still want to get my Leaving Cert” (qtd. in Ni Bhriain, 2012, p. 40)

**Modified Presentations**

In terms of the provision of theatre performances for school audiences there are currently a number of theatre groups that are engaged solely in the production of traditional, live staged performances of Leaving Cert theatre texts, *Second Age*\(^{27}\) perhaps being the most notable at the time of writing. As well as this various professional and amateur groups will commonly include exam texts in their artistic programme, examples in 2012 include a tour of *Macbeth* by the UK based company Icarus as well as a Pan Pan production of Ibsen’s *A Doll’s House* and Druid’s offering of *A Whistle in the Dark* by Tom Murphy (Ni Bhriain, 2012). Yet teachers and students are often inhibited by proximity as well as the availability of information regarding the quality of productions (Ni Bhriain, 2012). This combined with the perpetual pressure of the state examination has begun to influence the nature of

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\(^{27}\) Second Age was founded in 1989 and is dedicated to producing classical texts in an accessible manner. Each year the company undertakes the production of one of Shakespeare’s tragedies. Notable among these was the critically acclaimed, 2012 production of *Macbeth* directed by David Horan. In addition to each production the company provided Post-Show discussions and Workshops for teachers and compiled resource notes for students of the text. (‘Second Age Theatre Company’, n.d.)
theatrical engagement that is both favourable and available to teachers and students. This is evident in the growing popularity of locally performed, workshop style presentations that are particularly prescribed for Leaving Certificate students. In general these productions by groups such as Cyclone Repertory and Theatre Royal select a number of key scenes from the play, these are then performed and interpolated with focused discussions based on themes, characters and context. While the goals of these structures, to facilitate a connection between performance and text, as well as to encourage engagement are admirable, such an approach raises a number of questions (Ni Bhriain, 2012).

Many teachers appreciate the opportunity for students to deconstruct and reinterpret the play. Certainly when presented as part of a range of diverse experiences of the work in question such an approach would present a notable asset. Indeed this may have the effect of discouraging the notion of a ‘correct’ version. However, the financial and logistical challenges of these visits mean exposing students to such variety is unlikely. Therefore difficulties may arise when these workshop style performances are presented as an alternative to a full-length, live staging. It seems likely that such an approach could have the effect of rooting students association of the play even further in the context of the state exam. Rather than having the opportunity to see the performance in its entirety, free from the constraints of the classroom, as a work in and of itself, instead understanding in terms of predefined exam categories is even further engrained. Added to this, as such performances are specifically tailored towards Leaving Certificate students, those attending do not avail of the experience of participating in a typically mixed theatre audience, an integral part of the theatre experience. This is significant as for many students these are their only access points for professional theatre and represent an important opportunity to develop a longer-term interest in theatre.

**Thirst for Reform**

While educators persist within the limitations of the current system there is a growing desire for reform, this is reflected in current efforts to redesign the Junior Certificate syllabus. Under the new system schools will have the flexibility to decide what combination of subjects, short courses and learning experiences they will provide during the three year programme. While schools may choose from what is available including Digital Media Literacy, Artistic Performance and Coding/Programming among others, they also have the option to develop their own short courses in particular fields in order to meet the specific needs of their students (‘A Framework for Junior Cycle,’ 2012).
Most significantly the reformed programme includes the phasing out of the current state examination in favour of a school-based form of assessment. This new model will emphasise learning process as well as product, combining students’ work with a final assessment. Although the state examination will be retained this will comprise just one element of assessment. The reformed system professes to ensure that evaluation is kept as close to the point of learning as possible and will include ongoing classroom assessment as well as projects, assignments, practical activities etc (‘A Framework for Junior Cycle,’ 2012).

While perhaps the most vital element in terms of reform these changes to assessment are also the most controversial. Initial proposals were rejected by both of the major teachers’ unions, the ASTI and the TUI. The dispute has resulted in a series of industrial actions and at the time of writing a revised proposal is under consideration by unions. The new proposal will drastically reduce the role of teachers in assessing their students. The initial framework included an examination assessed by the State Examination Commission (SEC), with a weighting of 60%. The remaining 40% would then be allocated for continuous assessment of schoolwork to be carried out by the teacher (‘A Framework for Junior Cycle,’ 2012). However, under the new proposal assessment of schoolwork would include a written task which will be evaluated by the SEC, greatly diminishing the role of the teacher in this process (‘Unions to ballot members on Junior Cycle reforms,’ n.d.).

Considering the challenges encountered throughout attempts to reform the Junior Certificate syllabus, an examination of considerably less significance in relation to the trajectory of students’ careers, it would appear that at the time of writing meaningful change with regard to the Leaving Certificate is yet some way off.

The Finnish Example
The disjuncture between stated curricular aspirations in regard to engagement with theatre and that which is made possible in actuality, is symptomatic of a broader severance between ambition and process that appears to pervade the educational system. While guidelines for the current syllabus profess a commitment to creativity, critical thinking and cooperative engagement, these are simply not facilitated by the existing system. Rather its segmented structure as well as an undue focus on quantification and assessment, inhibit the development of such skills. This appeared to contribute to the general uncertainty among both teachers and students with regard to the purpose of Macbeth as well as the aims of large portions of the syllabus in general. While throughout the process of study teachers and students sought to prepare for success in the Leaving Cert exam, there was little
consideration with regard to how this related to their greater educational experience or what benefit it offered students in a real sense.

While it is clear that there is a marked disparity between the skills and abilities nurtured and valued in the Irish education system and those esteemed in broader cultural and societal contexts, one of the greatest challenges in addressing this imbalance is one familiar to this research, that of time. The methods required for a major re-evaluation of what it means to teach, to learn, of education as a concept call for patience in an age that demands immediate results (Sahlberg, 2014). As noted in the literature review western education systems have remained largely unchanged since the broad provision of free, public schooling at the time of the Industrial Revolution. As such traditional notions of schooling are deeply engrained in the cultural consciousness. The significant infrastructural, ideological and pedagogical changes that such reform would demand render it unsurprising that few countries have attempted to tackle this issue in any meaningful way. It is therefore interesting to consider a notable exception to this general inertia, the reform of Finland’s education system.

**Economic Necessity, Pedagogical Invention**

Interestingly Finland’s steps to remake their approach to teaching and learning grew out of circumstances not wholly dissimilar to challenges facing many European nations (including Ireland) at the time of writing. In the early nineties Finland experienced a sudden and severe economic recession that brought the country to the verge of financial meltdown. The crisis demanded a major rethink of the country’s economic and trading structures that had the effect of sparking a survival spirit among the populace. Central to the governmental response was the development of a new national competitiveness policy designed to promote private sector innovation and focused heavily on the development of telecommunications, with Nokia as a key player. Within a surprisingly narrow timeframe Finland managed to emerge from its economic struggles dramatically reducing its traditional dependence on natural resources and transforming its economy to one based on information and knowledge ('Finland: Slow and Steady Reform for Consistently High Results,' 2010).

Finnish employers began to send strong signals to schools regarding the kind of skills young people would require to succeed in this new economy. They focused not only on mathematics, science and technology, but also the importance

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28 Refers to the Global Financial Crisis of 2007/08 and the subsequent Irish Financial Crisis 2008-2014
of creativity, problem solving, teamwork and cross cultural projects. Educational reforms introduced in response have seen Finland’s schooling system ranked among the top in the world. Since the publication of the first PISA\textsuperscript{29} results in 2001 it has appeared unfailingly in the top tier of countries and is particularly notable for its consistency across schools (Ropo, 2012). Finland’s success and the context which gave rise to it, pose a number of significant questions regarding the interdependencies between education and other sections of society (Sahlberg, 2014). This combination of factors make Finland a particularly interesting point of comparison for the Irish system in our attempts to examine how we can align the values and aspirations of our educational processes with that of wider culture.

**A Culture of Collaboration – Assessment**

Finland’s education system embodies a number of approaches and ideals separating it from its OECD counterparts, including Ireland. One of the most significant distinctions in the Finnish system is its focus on collaboration. Collaboration is not only central to learning and classroom activities, but pervades the system itself as a core value. In contrast to approaches commonly employed in other countries, the Finnish system places very little emphasis on quantitative, high-stakes testing. Instead three forms of assessment are utilised. Firstly students are evaluated in-class by their teachers. These evaluations are not stark grades, but narrative in nature, utilising diagnostic, summative and formative measures. Indeed students do not receive official grades at all until approximately eleven or twelve years of age.

Students also receive a comprehensive evaluation of their progress at the close of each semester. This is provided in the form of a report card, detailing performance in academic as well as non-academic subjects, engagement and behaviour. The report card is a cumulative professional judgement on the part of the teacher, with the criteria for this judgement being decided upon by the school based on national assessment guidelines. As such report cards are not based on any standardised or objective criteria and those issued by separate schools are not necessarily comparable.

Thirdly once students have passed the required courses at second level they have the option of being assessed externally by The National Matriculation Examination. Students take the test in a minimum of four subjects including Mother

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\textsuperscript{29} The Programme for International Student Assessment (PISA) is a triennial international survey which aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students. To date, students representing more than 70 economies have participated in the assessment. (‘About PISA’, n.d.)
Tongue, Second Domestic Language, Foreign Language and Mathematics. Students can choose to combine these with additional subjects of their preference and have the option of sitting them over a period of three semesters (alleviating much of the pressure associated with intensive exam sittings such as that embodied in Leaving Certificate). These exams consist of general essay type questions, the purpose of which are to assess whether students have appropriately assimilated the knowledge and skills required by the core national curriculum, as well as ascertaining if they have attained a level of maturity in line with the expectations of a second level graduate. Completion of The National Matriculation Examination is a requirement for progression to third level (Sahlberg, 2014).

**Learning Communities**

Notably teachers are responsible for the majority of their student’s assessment as well as the design of their curricula. Here we see a significant example of the collaborative emphasis at the heart of the Finnish system. Much of teachers’ out of class time is given over to the formulation of curricula and assessment and this is achieved in active collaboration with other teachers. Large portions of teachers’ working hours are spent outside of the classroom, learning how their colleagues teach and working together towards the development of the school and engagement with the community. In this way teachers are given the opportunity to inform the work of one another as well as reflect on their own teaching approach (Sahlberg, 2014). This process which has the effect of building a shared accountability among teachers, as well as professional learning communities is in marked contrast to the working relationships observed throughout this research, whereby teachers appeared to be in active competition with one another, each struggling to progress through the course at a similar or more advanced pace to that of their colleagues.

Here again we see the significance of time. Finnish teachers spend a considerably lower proportion of their working day in the classroom than their OECD counterparts. In comparison to Irish teachers who spend an average of 725 hours a year teaching in-class for example, Finnish teachers are engaged in just 600. This offers a greater proportion of time for the professional development activities mentioned above (Sahlberg, 2014). The control and flexibility afforded Finnish teachers as a result mean much more emphasis can be placed on personalised learning and creative teaching practices. The opportunities granted teachers to design and embed assessment into the curriculum is also of significance here as it greatly informs the teaching approach, allowing emphasis on understanding and the development of knowledge, while avoiding the pitfalls of teaching to test, such as
drilling and memorization (Ropo, 2012). In contrast as has been seen in this research, Irish teachers struggle to find the time to source relevant and engaging resources or develop creative approaches for the improvement of their classes. Rather they are compelled to stick rigidly to the standardised curriculum.

While this approach has the effect of emphasising collaboration rather than competition among educators, it also has significant influence on relationships between students. Finnish students are judged against the context of their own potential, their respective characteristics and abilities rather than uniform standards. This has the result of discouraging unhealthy competition among students and thus fostering an atmosphere where students can work together, combining a variance of student learning approaches for the enrichment of the group (Sahlberg, 2014). This is particularly interesting when we compare it to the findings discussed earlier in this research whereby teachers noted that students were possessive of, and thus reluctant to share their more innovative ideas.

Quality versus Quantity
Like their teachers, Finnish students too, spend much less time in formal class than students in other countries and indeed are assigned a much lower volume of homework. The general perception among Finnish educators is that large volumes of homework do not necessarily lead to better learning, particularly when as is often the case, students are compelled to work on routine and intellectually unchallenging drills (Sahlberg, 2014). Instead emphasis is placed on the quality of in-class activity. In a Finnish class it is rare for a teacher to stand at the top of the room lecturing for the duration of a session. Rather students will be rotating through workshops, researching information, working on individual or group projects, while asking questions of one another and of the teacher.

Students develop their own weekly learning objectives in consultation with their teacher and work on these at their own pace. The cultivation of independent learning practices allows students to develop the cognitive abilities to frame, assess and solve problems as well as to evaluate and improve their own work (Ropo, 2012). With shorter hours of instruction and considerably lighter homework loads students frequently spend much of their after school hours in youth and sporting activities. Such groups seek to develop students' social and personal skills and are considered to be a significant contributor to educational performance (Sahlberg, 2014).

This approach appears somewhat paradoxical when we consider the more common practice whereby additional hours of instruction and individual study are
routinely sought as a solution to shortcomings in standardised systems, such as that of Ireland. Yet Finland consistently outperforms such countries in international evaluations. While evidently less effective this approach is invariably more stressful for the student. The national PISA report found that 7% of Finnish students described experiencing anxiety while attempting to complete a mathematics assignment at home compared to 52% in Japan and 53% in France. The relaxed learning environment cultivated in the Finnish system is thus a likely contributor to its success.

The Commodification of Learning
This disparity between the quality of learning and the quantity of work is also of interest if we consider the commodification of learning cultivated by systems that employ increased hours of instruction and homework as a response to educational imperatives. A 2011 study by the The Economic and Social Research Institute (ESRI) found that almost half of all Leaving Certificate students partake in some form of private tuition (Smyth et al., 2011). While an emphasis on greater volumes of instruction has led to a proliferation of private, fee-paying 'grinds' schools and specialized exam institutions such as Yeats College in Galway and The Institute of Education in Dublin, becoming a mainstay of the Leaving Cert preparation process, in the Finnish system such private tuition is extremely rare (Brown Ruzzi, 2005). This is a worrying trend that undoubtedly has serious implications for the equity as well as the quality of the Irish education system. Added to this the demand for ‘grinds’ represents perhaps the most potent symptom of the preoccupation with ‘teaching to test’, endemic the Irish education system.

Possibility and Positivity
The Finnish system provides an interesting point of reflection for competitive, contemporary education systems such as Ireland’s. However these reforms must be considered in relation to the particular social and cultural framework of Finland. Certainly it is not the view of this researcher that such approaches could be directly applied to the Irish context without due consideration of the specific subtleties and nuances at work within it. Undoubtedly determining the shape of reform in the Irish system would require extensive consultation and collaboration with educators and a variety of stakeholders. Yet the Finnish example does offer great cause for positivity in demonstrating that while indeed challenging, reimagining a pedagogical paradigm more aligned with the values of contemporary culture is possible. As such there is much to be learned from it.
While the success of Finland’s education system in international rankings legitimises its approach in terms of traditional educational aspirations, so too does it address the ‘otherness’ of education observed in this research. The relationship between economic change and the reform of the Finnish education system in many ways speaks to Donna Haraway’s ‘dissolution of boundaries’ as discussed in the literature review. For Haraway these boundaries are associated with the manner in which humans are compelled to artificially segment and organise the events of daily life. She describes how the cultural imprint of the digital can be detected in the dissolution of boundaries such as the market, home and work environment (Haraway, 2010). The synthesis of education and industry seen in the Finnish example is an interesting illustration of this. While demonstrating its potential benefits on a societal scale, the embodiment of this collaborative ethos within the reformed education system itself is perhaps another thought-provoking instance of how societal structures inform systemic processes and vice versa. As noted by George Spindler in Chapter Three “The smallest part of the whole seems to reflect the whole… if we know how to read it” (McDermott and Erickson, 2000, p.11).

Yet in the Irish context, as has been noted throughout this chapter, Macbeth, as with much of the educational experience, is often perceived as strictly distinct from other areas of life. While Haraway notes that the dissolution of boundaries facilitated by digital technology challenges a oneness that must isolate the ‘other’, it is interesting to consider that the failure of traditional education as embodied here in the Leaving Certificate approach to Macbeth, to embrace such characteristics has resulted in the educational experience itself being perceived as inherently ‘other’. As has been outlined thus far, seeking to instil in students the mastery of an applied standard is increasingly irrelevant in a culture where there is no singular voice. Thus while the embodiment of creative and collaborative processes as opposed to the transmission of such standards may prove a more enriching and longsighted approach to the educational experience, so too does it pose significant implications for realigning the values and aspirations of the education system and that of wider culture.

It is only through recognition of the necessity for radical reform of educational structures, aspirations and processes, that the full potential of digital media in the learning process may be harnessed. In this way we may begin to understand the role of technology in realigning formal learning contexts to contemporary perceptions and expectations of narrative. Yet it is the view of this researcher that in the wake of such reform digital media could possess significant
promise in facilitating an improved educational experience. The insights of the
digital storytelling workshop reveal significant potential in this regard.

As has been noted one of the most important issues in aligning formal
learning contexts to contemporary perceptions and expectations of narrative is the
degree to which the educational experience is perceived as distinct from the
everyday lives of most students. While in years gone by the information we
consumed could be amalgamated relatively neatly into the fabric of everyday life,
this is no longer the case (Ohler, 2008). The reason for this is largely rooted in the
dichotomy widely discussed thus far between the foundation of educational
processes in a culture that assumed the future would remain broadly similar to the
past and the necessity for the contemporary student to participate in a society
where change is the rule rather than the exception. It is thus unsurprising that
students experience difficulty perceiving meaning embodied in narrative texts
exemplified here in Macbeth, in the context of their broader experience (Wesch,
2014). As such, the experience of these works is at risk of being confined to the
realm of the Leaving Certificate, limiting their meaning and hence their purpose
beyond this.

This contention is augmented by the theories of Bruner, who noted that
place is crucial in the way it shapes the stories that are told or could be told,
therefore the otherness with which the educational experience is perceived risks
confining any meaning extolled from learning material to this context. For Bruner this
meaning does not exist in and of itself, but must be created in the mind of the
learner (Bruner, 2004). This contention is underlined by the transience of
contemporary culture which, as has been noted, necessitates that students move
beyond a role as mere consumers of meaning, to developing the skills to create
meaning. The potential of narrative learning to facilitate connections between
learning material and the broader experience of the student is thus of great
significance in relation to extending its resonance. The potential of digital storytelling
in the development of creative skills as well as extending the meaning of learning
material was thus explored.

**From Consumer to Participant**
The workshop sought to embody the theories of Dewey by compelling students to
create an original interpretation of a scene from Macbeth. In doing so it was
proposed that students would be urged to synthesise their learning material (in this
case the Macbeth scene) with their internal learning processes and experience. In
utilising digital storytelling to achieve this, students would be required to locate,
evaluate, combine, manipulate and utilise sourced content in order to communicate their desired concept.

By compelling students to engage with mass media in this way it was hoped that they might develop a greater understanding of its nature, the techniques embodied within it, how these are used as well as their impact. In this way the digital storytelling process could prepare students to become active participants in broader culture as well as positioning the learning material in this context. The accessibility of the tools utilised together with the apparent ease with which students were able to navigate the digital environment rendered digital storytelling a powerful medium for creative expression. Thus in circumventing a rudimentary focus on tool literacy the process facilitated greater emphasis on the development of narrative skills. Added to this, it was felt that the potential connections, creative possibilities and variety of media use facilitated by the process broadened the possible conversations that could occur with regard to the learning material. As Bruner notes the self-telling of life stories are guided by cultural, linguistic and interpersonal factors (Bruner, 2004). Thus in allowing learning material to enter the language of students so to speak, this presented greater opportunities for positioning it in relation to their broader experience.

**Art versus Artefact**

This approach also presented an interesting correlation with aspirations outlined in the review of literature for aligning the experience of the student studying the play and that of the theatre creator seeking to interpret, embody and remake it. As earlier noted the accessible human fallibility at the core of *Macbeth* has led many artists and film makers to look to it as a conduit through which a variety of complex societal and cultural issues can be explored. It has therefore frequently proved a rich and diverse resource in exploring a range of cultural contexts. In many ways these interpretations embody the theories of Dewey regarding the vital interaction between external and internal learning experiences (Dewey, 1998).

Thus in considering the material text of *Macbeth* in relation to their background and experience such artists were able not only to examine and hold a mirror up to a variety of contexts, but to extend the meaning of *Macbeth* as a work. This process of taking an existing work and altering it for those that come after is also inherent to Dewey’s sentiments with regard to an enriching and fulfilling learning experience; moreover it could also be argued that such re-evaluation and personal interpretation are in many ways inherent to the nature of performance and
should thus fulfil an important role in any consideration or analysis of dramatic texts (Dewey, 1998).

The correlation identified here between the artist and the student suggests that in embracing techniques such as digital storytelling and thus facilitating the role of student as creator, it is conceivable that narrative texts such as *Macbeth* may become vehicles of understanding. Thus in much the same way as diverse re-workings of *Macbeth* such as that of Polanski and Woolcock, discussed in the review of literature, revealed new insights into the culture in which they were performed, exploring *Macbeth* in relation to personal backgrounds and experiences could extend the student’s comprehension of both.

Rather than the cultural artefact suggested by current educational approaches to the play, this process emphasizes the nature of *Macbeth* as a living artwork offering new perspectives on the societal context and experience of student creators, thus extending its cultural life. Through embodying such an approach *Macbeth* becomes more meaningful for students allowing them to identify with it on a personal level, blurring the boundaries of their educational and recreational experience.

**Flexibility, Relationships and Context**
Crucially the workshop underlined the earlier findings regarding the pivotal role of the teacher as the orchestrator of such tools within a diverse and engaging learning environment. Any further research should thus consider how teachers could utilise digital storytelling in a manner that effectively responds to the varied needs of their students. How might they maintain a balance between encouraging creative freedom and ensuring students remain focused on the task at hand? Moreover, participants in this instance were found to struggle significantly with regard to public speaking and thus presentation of their work. Greater exploration concerning how teachers might assist students in this area is essential if the potential benefits of digital storytelling are to be fully accessed and understood.

**Conclusion**
The ‘otherness’ of the educational experience described throughout this chapter raises a number of questions with regard to the appropriateness of the Leaving Cert and similar approaches in preparing students to become active participants in society, as well as to realise the extent of their own potential. Yet this issue is all the more acute when considered in relation to the rise of digital culture. Whereas contemporary society continues to embody the ambiguity and fluidity enabled by
technology, education remains dominated by a culture of rigidity. Together with this a preoccupation with quantification and a dedication to perceived ‘fairness’ have resulted in a high level of standardisation. This has led to a situation where skills such as memorization and reproduction of information are valued above analytical and creative ability, ironic in a world where information cannot only be accessed easily, but instantly.

However, despite the restrained, arrested manner in which Macbeth is approached in the curriculum, in many ways the play itself embodies this culture of connectivity or ‘confusion of boundaries’. The many parallels discussed earlier in this chapter regarding issues explored in Macbeth and those brought to the fore in the digital context underline the potential of Macbeth to create meaning beyond the classroom, informing student perspectives. The facilitation of the digital storytelling workshop sought to elicit the potential of Macbeth in this regard. In so doing it strove to inform the focus and direction of further research in this area. The challenges of implementing digital storytelling were central to this study. How might teachers acknowledge these in relation to their own approach as well as the specific needs of their students?

Further to this research a series of potential advantages regarding the implementation of digital storytelling in the Irish second level context were identified. Through challenging students to conceive of personal interpretations of their learning material, the process appeared to stimulate students to consider concepts presented more deeply and in relation to their own personal experiences and background. Digital storytelling was therefore found to embody Dewey’s theories regarding internal and external learning experiences, thus extending the meaning of such material for students. Added to this, in facilitating the creation of personal interpretation, digital storytelling granted these students access to the internal learning processes of their fellow students, providing a significant source of inspiration and reflection.

Together with this active, creative engagement was found to be a central factor throughout the session. Unlike the passive and largely broadcast style of interaction facilitated by Shakespeare in Bits and other applications examined in the literature review, this type of activity challenged participants while affording them with a sense of ownership. Inevitably engaging the personal learning approach of students in this way elicits a variety of responses, necessitating receptiveness and sensitivity on the part of the educator. Digital storytelling was observed to possess significant potential in embodying the flexibility necessary to achieve this. Hence the study established the legitimacy of further investigation into the promise of digital
storytelling as a compelling instrument in striving to create an environment in which students feel comfortable and stimulated to participate.

However, the time consuming nature of digital storytelling would likely prove prohibitive to its integration into the already stretched curricular schedule. Questions regarding the structure and form of the current curriculum have been discussed at length throughout this chapter. Of particular concern in this regard is the predominant focus on the passive assimilation, retention and reproduction of information. Undoubtedly there is a strong desire to address these issues among educators and policy makers alike. This is exemplified in the design of the reformed Junior Certificate curriculum. Most significantly the new curriculum involves a level of departure from the existing model of a high stakes written examination.

Although modest in scale the introduction of continuous assessment is particularly relevant in regard to the flexibility it could afford educators in terms of time, thus having implications for their approach and the range of activities they may implement. The new syllabus strives towards a greater focus on the development of oral and linguistic skills, advocating an integrated approach to oral language, reading and writing. Added to this the introduction of a series of short courses including Digital Media Literacy and Artistic Performance could represent significant opportunities for the implementation of digital storytelling ("Junior Cycle English," 2013).

However, the level of objection to this reform, primarily centred on the proposal that teachers, rather than independent examiners will assume responsibility for formal student assessment, demonstrates the degree of anxiety posed by the reimagining of a system so deeply engrained in the public consciousness. Thus while an acknowledgement of the necessity for change exists, there is presently little consensus with regard to how this should be implemented. Future research in relation to digital storytelling must therefore seek to closely monitor and engage with this evolving situation regarding structures and attitudes in the education system.

The education system in its current form, with a predominant focus on information retention and high stakes testing, is unlikely to embrace activities like digital storytelling. Yet as educators and policy makers begin to reassess the shape of education, seeking a system that prepares students for full participation in contemporary society, as well as extensive realisation of the potential of individual abilities, digital storytelling offers notable promise as a practical application of such aspirations. As such, this study establishes the viability of further research in this area, while outlining a series of recommendations for this in regard to form and
direction. It therefore advocates the potential of digital storytelling as a credible response to the main objectives preoccupying this research in seeking to rectify the disjuncture between formal learning contexts and contemporary perceptions and expectations of narrative as well as the broader aspiration of an education system more attuned to the demands and values of wider culture.
Chapter Six: Conclusion

Introduction
This research is grounded in the understanding that while digital media permeates contemporary society informing the manner in which we structure and describe our lives, education systems continue to be dominated by the values of print culture. It thus set out to explore the potential of digital media to rectify this disjuncture between formal learning contexts and contemporary perceptions and expectations of narrative. This apparent disparity raises a series of questions regarding the appropriateness of such a system in preparing students to become active participants in society as well as to realise the extent of their own potential. What are the implications of this for students’ engagement with their learning material and its potential meaning beyond formal learning contexts? How does it inform students’ educational experience and thus their perceptions of learning? How does this problem manifest and as such how can it be responded to?

While theorists such as Ken Robinson and Michael Wesch have noted the disjuncture between educational values and contemporary culture in a general sense, this research sought to explore how this disconnect is embodied in the activities and processes of the classroom, with particular focus on the Irish second level context. How can this be identified in daily experiences and interactions? What are the relevant contributory factors? How is this informed by media use and how can it be appropriately addressed? In exploring such questions the research sought to consider the position of Shakespeare’s Macbeth in the Irish Leaving Certificate curriculum as a case study.

This process of investigation revealed a series of interesting insights regarding the nature of the syllabus and the challenges encountered by both teachers and students operating within it. The examination of the Macbeth case study informed the trajectory of the research significantly, prompting a more holistic consideration of educational values and aspirations, their consequences for the learning experience and what this means for the integration of technology. This chapter will synthesise the findings of the research illustrating the manner in which they extend the existing literature and respond to the research questions. Together with this, the chapter will outline the theoretical and policy implications of these findings as well as how they may inform future research in this area.
Form, Manifestation and Consequences

Macbeth the Microcosm

As earlier noted in this research, abstract concepts such as education can only be understood through the people upon whose lives and work such abstractions are built (Ferrarotti, 1981). Therefore in order to ascertain the shape and form of challenges outlined in the research question within the realities of the classroom context obtaining such an understanding was essential. The place of Macbeth in the Irish Leaving Certificate system proved an interesting and pertinent vehicle for exploring such an insight and thus addressing the main questions occupying this research. As a work Macbeth’s narrative embodies a number of interesting parallels with the circumstances that underlie such questions. While many of the challenges facing contemporary notions of education are symptomatic of a culture in transition, similarly Macbeth was conceived in an age where a number of the same notions of selfhood, privacy, societal structures, media and economy were being called into question. Macbeth embodies the cultural moment, therefore its narrative reflects the ambiguity inherent in such transformation, condensing vast concepts such as those mentioned above to a human and relatable scale. Thus in many ways Macbeth can be understood as a microcosm of the challenges existing in the education system as a whole in content as well as form.

Perception, Utilisation and Interaction

Interestingly this symbiosis between challenges encountered at a human level and wider systemic issues was found to play out in the research itself. The initial stage of the study, comprising a series of classroom observations and interview sessions, was conducted with the goal of achieving a thorough understanding of the classroom experience of Macbeth. The results of this revealed a number of insights regarding the dynamics of the research question within the real life scenarios and interactions of the classroom. Inevitably this informed the nature and trajectory of the study in a number of ways.

As noted above the research question itself sought to explore the possible role of digital media in rectifying the disjuncture between formal learning contexts and the contemporary student’s perceptions and expectations of what a narrative should be, how this should be experienced. This stage of the research exemplified the character of this disconnect, as well as a series of instances through which it was observed to manifest. Confirming the premise of the research question, while students were generally found to have an appreciation for Macbeth, this was largely
confined to the context of the Leaving Certificate, with the play being perceived primarily as a school text.

However, what emerged most robustly at this stage of the research was the pivotal role of the teacher in utilising a variety of instruments and techniques in the creation of a stimulating learning environment. This was demonstrated on a number of occasions through the use of intuitively static and uninspiring tools such as printed hand-outs. Printed hand-outs were typically composed of preformed analysis regarding characters, themes etc. These would generally be read through in class by the teacher or retained by the student, for individual study, facilitating little engagement and a rather passive experience of the play. The prevalence of this process recalled the observation of the literature review regarding the rapid, silent reading facilitated by print and the influence of this on perceptions of learning as a primarily solitary experience, occurring in the mind of the individual (Ong, 2013). This therefore appeared to suggest the sustained dominance of print culture within education.

However, hand-outs were observed to be effective and dynamic resources in the hands of one particular teacher. For this teacher hand-outs presented an important starting point for classroom discussion and debate. Rather than simply reading the hand-out this teacher would ask questions around the points raised within it and invite students to venture counter arguments. Similarly potentially more dynamic and stimulating multimedia resources were utilised in extremely passive and uninspiring ways. The most obvious example of this was the use of audio performances. Classes would listen to the recording, with the teacher then pausing the audio in order to go through the text line by line, compelling students to transcribe explanations provided to them.

This finding emphasised the significance of considering any intervention in context. It thus underlined the pertinence of interactions and relationships in the classroom, as well as the potential role of any intervention in augmenting and facilitating these. This is perhaps an area which can be seen as somewhat underdeveloped in relation to the digital responses to Shakespeare, discussed in the review of literature. Tools such as *A Conversation With Sir Ian McKellen* and *Shakespeare in Bits*, do not emphasise this to any great extent. Rather they are geared towards the relationship between a single user and the screen, embodying to a large degree the principles of print culture. While some, such as the National Theatre’s *Hamlet Mind’s Under Stress* and *Globe Education Shakespeare: Macbeth Dynamic Learning* do go some way in considering how they will stimulate collaboration in the classroom environment, they are limited in that their format is
principally broadcast in nature. Thus the communication is largely inactive and one way. In themselves such resources are essentially passive rather than collaborative.

**Curricular and Systemic Challenges**

Much like the printed handout the degree to which these resources could be applied as a tool for stimulating collaboration is dependent on the individual teacher. While a number of challenges and obstacles were observed to thwart teachers in the promotion of more creative techniques and thus in generating the type of engaged learning environment to which they aspired, the most significant of these was the curriculum itself. Teachers were under constant pressure to complete each area of the syllabus within the designated timeframe. This left virtually no room for them to introduce or experiment with more stimulating activities. Added to this it was unlikely that the structure of the Leaving Certificate would reward such an approach in terms of results. Considering the nature of the existing system the degree to which the majority of teachers could prioritise the optimum use of these applications is doubtful. This demonstrates that elegant designs of this type, while perhaps creating a more dynamic and engaging experience of the play are limited in the degree to which they can influence learning in the absence of systemic reform.

**Otherness, Possession and Finality**

These concerns informed the shape of the research substantially. While the initial questions regarding the role of digital media in narrative education remained central to the study, it became clear that such a role could only be adequately addressed in the context of educational approaches in a more general sense. As has been noted, media are not passive tools of communication, but filters that can shape what is being said, who can say it, who can hear it and how it can be said (Wesch, 2014). The growth of digital technology therefore has a profound influence on social, economic, political and community life, thus the nature of culture as we understand it. Yet while wider society continues to embody the fluidity, ambiguity and transience inherent in the growth of technology, education remains dominated by a culture of rigidity.

Together with its significance relating to the manner in which it informed the scope of the study, this is also an interesting reflection of *Macbeth*’s narrative, which as noted above offered detailed insight into the sociocultural landscape from which it emerged, in turn informing that landscape. In the particular case of *Macbeth*, the esteem in which it is held as a work of cultural and literary significance has led to an understandable desire to preserve it. Such a desire is easily reconciled with the
traditional educational approach of retention, reproduction and quantification. It is therefore unsurprising that moving away from this model presents an enormous crisis of conscience in both educational and cultural contexts.

As noted in the literature review this mentality is highly informed by print culture. Print secured words resolutely in the visual field, rendering them entirely more ‘thing-like’ (Ong, 2013). In this form the completed original work is easily identified and acknowledged, informing an understandable desire to protect it. The extent to which traditional learning approaches are informed by this culture appears to have contributed to a situation whereby current curricula are dominated by ‘learning objects’. Be they in the form of sample answers, or analyses of themes, characters etc. these objects are completed articles possessing educational value in and of themselves, to be consumed and retained with a view to reproduction. They too are inherently ‘thing-like’ and thus easily quantified.

**From Possession to Process**

This consumerist approach to learning is symptomatic of a culture that assumes the future will remain broadly similar to the past, yet as has been noted on numerous occasions the contemporary student must seek to participate in a culture characterised by transience. If we consider that the role of education is to prepare students to function more effectively in society, as well as to realise the full potential of their individual abilities, this raises serious questions regarding the appropriateness of such a system. However, while it appears to be acknowledged that skills such as creativity, problem solving and collaboration are essential for the full development of any contemporary student, problems arise in that these skills are more concerned with process than the completed object. While this is highly appropriate in relation to a contemporary culture of motion, it inevitably presents challenges for traditional educational models grounded in the standardisation, acquisition and quantification of learning objects. As such these models persist in examinations like the Leaving Certificate, continuing to facilitate a situation where skills like memorization and reproduction of information are valued above analytical and creative ability. This is clearly demonstrated in the absence of any dedicated accreditation for creative ability in the PCLM\(^\text{30}\) marking scheme.

Such an approach is indeed ironic in a world where information can be accessed not only easily, but instantly. Yet these techniques may also have

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\(^{30}\) PCLM is the marking system employed for the Leaving Certificate English Examination. P refers to clarity of purpose (has the question been answered?), C is coherence of delivery (is the response well structured?), L stands for language and M is mechanics (spelling and grammar)
implications for students’ thought processes. In the review of literature the inherent finality of print culture and its dominance in relation to wider culture was noted by Thomas Pettitt to have significant implications for societal attitudes, confining thought processes to abstract categories such as nations, race and gender (Metcalfe, Paradis and Pettitt, 2010). Both Pettitt and the theorist Donna Haraway recognised how such categories were becoming less defined in the digital era. However, it was noted in this study that this form of categorical thought continued to be heavily propagated in the participating classrooms.

As previously outlined this appeared largely symptomatic of a system dominated by a culture of standardisation and teaching to test, therefore requiring significant pedagogical reforms earlier discussed. This dependence on pre-defined standards could potentially encourage students to perceive information as context free and thus true regardless of circumstance. As such, they may be rendered less open to new possibilities and vulnerable to a closed-minded, incurious mentality (Langer, 2010). This rigid dependence on predefined categories is therefore antithetical to a society characterised by ambiguity and transience.

**Between Aspirations and Actuality**

Thus in a manner similar to the way in which technology was found to be merely one instrument in the repertoire of a skilled teacher, its success or failure entirely dependent on their application of the resource in question, so the addition of technology into the education system as a whole can only serve as a benefit in as far as the nature of its use permits. As such in seeking to address the role of digital media in education and how this might facilitate engagement with narrative texts, it was first necessary to address the disparity between the aspirations and practice of the existing education system in a more holistic manner.

The theoretical desire to embrace the development of skills such as creativity, critical thinking and cooperative engagement is elucidated in current guidelines issued by the NCCA stipulating their integration across the curriculum (Ni Bhriain, 2012). However, these are simply not facilitated by the existing system. What appears here is perhaps a fundamental misunderstanding with regard to the nature of such skills and the extent of systemic restructuring their recognition and development would necessitate. Creativity is not merely about ideas, rather it is an iterative process whereby concepts are formulated, reviewed and assessed resulting in a judgement and commonly a change in direction (Robinson, 2011). As such this is a process requiring a willingness to experiment, to take chances and to make mistakes. Yet in the current system of high stakes testing there is virtually no
room for such a process. The extent of material means that teachers struggle simply to progress through the curriculum and nowhere in the final six hour and ten minute written examination are these skills adequately assessed. Similarly this approach creates little opportunity or impetus for collaboration or critical thinking.

Achieving the highest possible result in this exam is the primary goal for the majority of students and ensuring that they do so, that of teachers. The structure and sheer bulk of the course appeared to leave virtually no space for consideration as regards how this process would contribute to students’ greater educational experience or its benefits beyond the exam. Rather it appeared to favour a process of teaching to test, whereby learning material and narrative texts such as Macbeth are dissected into the learning objects (themes, characters, imagery etc.) described above, to be memorized, retained and reproduced. This is therefore a system equating that which is of value to that which is easily assessed.

This dissection of learning material is interesting in the manner in which it reflects the segmented nature of the education system as a whole. Although receiving severely limited facilitation at second level, as noted in previous chapters, skills such as creativity, collaboration etc. are prevalent at primary level. Added to this, these abilities are essential and expected with regards to undergraduate students entering third level (‘Joint Committee on Education and Skills: Third Level Curricular Reform,’ 2011). However, after the lengthy hiatus of second level many struggle in this area. There is thus no real sense of continuity in relation to learning development, necessitating a revaluation on the part of students with regard to what is of worth in their work.

With such limited consideration of the parts in relation to the whole within the education system itself, it is perhaps unsurprising that there appeared to be minimal understanding with regard to how engagement with learning material and narrative texts such as Macbeth fit into the schema of everyday life or of their possible benefits beyond the classroom. Inevitably this contributed significantly to the questions concerning this research including the disparity between formal learning context and contemporary perceptions and expectations of narrative as well as that between educational paradigms and culture in a general sense. Such findings necessitated significant scrutiny in relation to the form and structure of the existing curriculum as well as consideration of alternatives to address this issue.
Realignment Through Reform
Examination versus Experience

The example of the Finnish education system was thus examined as a precedent of such successful reform. As noted in Chapter Five the redesign of Finland’s education system was sparked by a sudden and severe economic crisis. The extent of this recession necessitated a significant rethink of Finland’s economic structures and a divergence from the country’s traditional dependence on natural resources towards a knowledge based economy. The pivotal role of education in such a transformation required significant engagement between educators, policy makers and industry. The resulting model sought to embody a focus not only on mathematics, science and technology, but also the importance of creativity, problem solving, teamwork and cross cultural projects.

One of the most significant disparities emerging from this investigation related to assessment. Whereas the Irish system is shaped and dominated by a final written examination, the Finnish approach favoured a combination of methods including in-class evaluation, report cards issued at the close of each semester and state examinations for those who wish to progress to third level. Notably with the exception of the state examination all other assessment is conducted by teachers themselves. This allows for a far greater degree of flexibility in relation to facilitating activities more conducive to the development of creativity, collaboration and problem solving (‘Finland: Slow and Steady Reform for Consistently High Results,’ 2010).

The Role of Teachers

Shifting the educational emphasis from the final assessment to actual classroom activity was central to the success of the Finnish approach. Design of the curriculum was placed largely in the hands of the teacher. In order to facilitate this, a significant portion of a teachers’ working life is dedicated to syllabus creation as well as collaborating with colleagues in the development of new techniques. While such approaches proved successful in avoiding the pitfalls of teaching to test, they also had the effect of fostering a greater atmosphere of collaboration among both teachers and students (Sahlberg, 2014).

The insights provided by the Finnish example underline the pivotal role of the teacher noted during the observation and interview stages. By placing the curriculum in the control of the teacher, the Finnish system acknowledges the significance of this role and the teacher as an experienced professional. As a result teachers are afforded the freedom and flexibility to overcome many of the
challenges observed in the Irish system such as time and rigid syllabi. This provides teachers with the opportunity to introduce a variety of activities focused on the development of important skills discussed thus far in this research including creativity, collaboration and problem solving. Together with this it has significant implications for the cultivation of relationships between the teacher and students as well as among the students themselves, noted to be of great significance in the development of an enriching and successful learning environment. As such, reforming the system in this way has the effect of moving the purpose of teaching away from a pure assessment focus, towards one concerned with the actual learning experience of students.

Creating Connections

While the success of Finland’s education system in international rankings legitimises its approach in terms of traditional educational aspirations, so too does it address the ‘otherness’ of education observed in this research. The relationship between economic change and the reform of the Finnish education system in many ways speaks to Donna Haraway’s ‘dissolution of boundaries’ as discussed in the literature review. For Haraway these boundaries are associated with the manner in which humans are compelled to artificially segment and organise the events of daily life. She describes how the cultural imprint of the digital can be detected in the dissolution of boundaries such as the market, home and work environment (Haraway, 2010). The synthesis of education and industry seen in the Finnish example is an interesting illustration of this. While demonstrating its potential benefits on a societal scale, the embodiment of this collaborative ethos within the reformed education system itself is perhaps another thought-provoking instance of the manner in which societal structures inform systemic processes and vice versa. As noted by George Spindler in Chapter Three “The smallest part of the whole seems to reflect the whole… if we know how to read it” (McDermott and Erickson, 2000, p. 11).

Yet in the Irish context, as has been noted throughout this research, Macbeth, as with much of the educational experience, is often perceived as strictly distinct from other areas of life. While Haraway notes that the dissolution of boundaries facilitated by digital technology challenges a oneness that must isolate the ‘other’, it is interesting to consider that the failure of traditional education as embodied here in the Leaving Certificate approach to Macbeth, to embrace such characteristics has resulted in the educational experience itself being perceived as inherently ‘other’. As has been noted thus far, seeking to instil in students the
mastery of an applied standard is increasingly irrelevant in a culture where there is no singular voice. Thus while the embodiment of creative and collaborative processes as opposed to the transmission of such standards may prove a more enriching and longsighted approach to the educational experience, so too does it pose significant implications for realigning the values and aspirations of the education system and that of wider culture.

The Finnish education system thus provided a notable precedent with regard to how the aspirations earlier discussed can be successfully implemented in the realities of the classroom environment. However, the controversy surrounding the relatively modest reform of the Irish Junior Certificate curriculum discussed in previous chapters underlines the challenges posed by such a process and the nuanced consideration of context it necessitates. As such, reform on this scale within an Irish context would require sensitive acknowledgement of the social, cultural and political factors at play. Despite this the Finnish example elucidated a number of key areas for consideration in order to address the questions concerning this research.

**The Role of Technology**

It is only through recognition of the necessity for radical reform of educational structures, aspirations and processes, that the full potential of digital media in the learning process may be harnessed. Indeed in the absence of such a shift it is entirely possible and indeed probable that the same problems could be perpetuated using technology. While not a panacea, within an education system where values have been refocused in order to support and develop skills such as problem solving, creativity, analytical thinking and collaboration, technology could offer numerous opportunities to facilitate a learning experience more attuned to the culture of connectivity. An understanding of how such an intervention might manifest was sought and to this end the potential of digital storytelling was explored as an embodiment of this process.

As outlined in the previous chapters, this segment of the research considered an exploratory study into the possible significance of digital storytelling to the specific questions concerning this research. Does digital storytelling have the potential to enhance engagement with *Macbeth* in the Irish Leaving Cert context and thus extend its meaning for students? If so how might such an activity manifest? In this way the study sought to examine the role of technology in realigning formal learning contexts to contemporary perceptions and expectations of narrative.
The workshop, compelling fifteen student participants to create an original interpretation of a scene from *Macbeth* presented significant potential with regard to enrichment of the learning experience. The accessibility of the tools utilised together with the apparent ease with which students were able to navigate the digital environment rendered digital storytelling a powerful medium for creative expression. It was felt that the potential connections, creative possibilities and variety of media use facilitated by the process broadened the possible conversations that could occur with regard to the learning material. Moreover obliging students to engage with mass media in this way was perceived to offer them greater opportunities to develop an understanding of its nature, the techniques embodied within it, how these are used as well as their impact.

Through compelling students to reinterpret *Macbeth* in relation to personal backgrounds and experiences digital storytelling was found to embody the theories of Dewey and thus exhibited significant potential to facilitate interaction between external and internal learning experiences. Dewey’s sentiments with regard to an enriching and fulfilling learning experience were also exemplified through the manner in which the creation of the digital stories necessitated that students must alter the work of *Macbeth* for those that come after (Dewey, 1998). As such through techniques such as digital storytelling it is conceivable that narrative texts like *Macbeth* may become vehicles of understanding.

Through embodying such an approach *Macbeth* becomes more meaningful for students allowing them to identify with it on a personal level, blurring the boundaries of their educational and recreational experience. Inevitably current curricular structures were found to be of particular pertinence in regard to the promise of digital storytelling. While as has been earlier noted there is certainly a growing appetite for change (in this regard) as exemplified in the new Junior Cert syllabus, at the time of writing this reform is the subject of significant controversy thus demonstrating the challenge of reimagining a system so deeply engrained in the public consciousness (‘Background To The ASTI Junior Cycle Campaign’, n.d.). It would therefore appear that at present reform with regard to the Leaving Certificate faces substantial obstacles.

**Findings and Conclusions**

The cultural and thematic framework of *Macbeth* thus provided an apt vehicle for assessing the concepts embodied in the research question. Together with this, in focusing on the case of *Macbeth* this study was able to consider the dynamics of such challenges within the realities of the classroom environment. How are these
informed by the role of the teacher, by relationships between teacher and student as well as among the students themselves? How do such challenges manifest and what are their consequences? As noted above considering the research question in this way informed the nature and trajectory of the study significantly. While many of the findings augmented the theories discussed in the literature review, they are particularly interesting in their illustration of how these can be found to manifest in the actual classroom environment. As such the following conclusions were discerned in relation to the development of teaching and the curriculum.

1. Systemic Reform: Embracing Intangibility and Acknowledging Experience

The disparity between education and the broader experience of the student was one of the primary concerns underpinning this research and indeed this was found to be deeply engrained in curricular and systemic structures. While the work of Haraway, Pettitt and Wesch among others has observed the ambiguity and transience of the digital age, education continues to be dominated by the accumulation, retention and reproduction of approved standards. As has been noted NCCA recommendations as well as proposed reforms to the Junior Certificate demonstrate a degree of recognition among policy makers and educators with regard to the inadequacies of such an approach. However, this has yet to be reflected in meaningful structural and systemic changes.

This disjuncture between the aspirations of the education system and the experience it facilitates appears to be symptomatic of a reluctance to move from a system grounded in an appreciation of finished products described here as 'learning objects', to one devoted to the development and acknowledgement of process. Certainly this presents challenges. As previously noted this mentality is deeply rooted in a culture of print. However, while this instils the notion of learning as something that can be possessed, if education is to truly reflect the nature of society it must embrace the intangibility of continuous process, thereby seeking to develop and assess skills such as creativity, collaboration, problems solving etc.

While the reform of the Finnish education system presents a promising precedent for such a shift, controversy surrounding the introduction of the new Junior Certificate syllabus is perhaps indicative of a failure to recognise the necessity for this fundamental change in values. The introduction of continuous assessment as part of the reformed Junior Certificate represents a significant step towards this recognition of process and the student’s development as central to the learning experience. However, this is almost entirely negated by the proposal that it be assessed by an independent examiner (‘Background To The ASTI Junior Cycle
Campaign', n.d.). While perhaps informed by a desire for fairness, such a step removes from the equation to a large extent the student and their educational journey, both of which will remain unknown and unseen by the examiner. Moreover, crucial skills such as collaboration, interaction and negotiation cannot hope to be appropriately determined in this manner. Instead assessment and accreditation rest with the completed document, thus failing to address the core shift fundamental to meaningful reform.

2. Empowering Teachers
Together with this, such an approach does little to empower the teacher in their position as educator. Throughout this research the pivotal role of the teacher in utilising a variety of instruments including verbal interaction, technology and print media in such a way as to create an environment in which students feel comfortable and stimulated to participate was highlighted again and again. The most significant obstacle inhibiting teachers in the creation of such an environment was found to be the curriculum itself. Teachers and students were submerged by the volume of material required by the syllabus. Simply keeping up with coursework was found to be a constant struggle, rendering the consideration of more creative and enriching approaches unreasonable and highly improbable. Added to this was the limited extent to which such an approach would ostensibly benefit students in the context of the Leaving Certificate.

While the teacher is best placed to assess and respond to the student as they interact with the learning material, independent examination deprives them of this responsibility. As such teachers must be granted a central role in the assessment process. Only through such an approach will teachers be afforded the freedom and flexibility to overcome the significant challenges posed by time restrictions and rigid syllabi. In this way they are granted the opportunity to introduce a variety of activities focused on the development of important skills discussed thus far in this research including creativity, collaboration and problem solving. Moreover this could have significant implications for the cultivation of relationships between the teacher and students as well as among the students themselves, noted to be of great consequence in the development of an enriching and successful learning environment. Perhaps most significantly respecting the role of the teacher as a professional educator in this way has fundamental implications for moving the purpose of teaching away from a pure assessment focus, towards one concerned with the actual learning experience of students.
3. Creating Student Creators

As noted throughout this research systemic reform, embodying such a fundamental shift in values is crucial if students are to be afforded the opportunity to develop beyond mere consumers of meaning to becoming creators of such meaning. As has been noted compelling students to synthesise their learning material with their internal learning processes and personal experiences is crucial if they are to distil significant meaning from their schooling. In this way both their understanding of themselves and their educational content are informed and enriched. However such engagement also has potential to enhance the classroom environment by exposing students to the diverse backgrounds and alternative views of their peers.

Moreover supporting students in the development of these skills is necessary when we consider the conflictual nature of information in contemporary society. In order for students to function effectively in our media saturated world, they must develop an understanding of the nature and persuasive effects of media. This can only occur through active engagement and manipulation. Thus while students must seek to become effective writers in order to communicate they must also strive to become effective media users to obtain an understanding of stories being conveyed to them as well as how to communicate their own.

4. The Role Technology: Digital Storytelling

It is only through recognition of the necessity for radical reform of educational structures, aspirations and processes, that the full potential of digital media in the learning environment may be harnessed. While offering opportunities to develop fundamental skills mentioned thus far such as collaboration, problem solving and creativity, through narrative learning and creative engagement, digital storytelling presents specific potential in the development of media and information literacy, thus facilitating active participation in the digital landscape. As noted in previous chapters digital storytelling embodies to a large extent the mashup culture that permeates much of the online environment.

While creating a digital story the student is generally required not only to create their own material, but to locate, evaluate, combine, manipulate and utilise sourced content in order to communicate their desired concept. The immediacy of digital tools and the ease with which students can share and publish their work is also of significance here. By engaging critically with mass media culture in this way students are confronted with many of the issues inherent to the transience of the digital platform including collaboration, appropriation, adaptation and sharing. Students may thus begin to develop an understanding of the nature of digital media,
the techniques embodied within it, how these are used, as well as their impact. In combining and manipulating a variety of media forms, students are encouraged to consider how these produce meaning, are organised and construct reality (Duncan, 1989). In this manner digital storytelling embodies many of the recommendations stemming from this research, thus presenting significant potential as a meaningful technological intervention.

Recommendations for Further Investigation
Curricula and Processes
Though modest in scale this research has provided a series of insights into theories relating to learning and technology particularly in regard to their manifestation in the Irish Leaving Certificate context. As noted above the scale and focus of this study allowed for detailed observation of the concepts underlying this research, how these are embodied in the classroom environment and their consequences for the relationships therein.

While in the case of initial classroom observation a broader sample may have been preferable, this would inevitably have resulted in a more cursory level of analysis. As well as being inadequate with regard to the depth of insight into the experiences of teachers and students necessitated by the research question, such a generalised approach would also run counter to the contention that all educational approaches must to a certain extent respond to the specific needs of the student group in question.

The exploratory nature of this study has established the validity of further research in this area and thus laid the ground work for more extensive development by future researchers. While greater examination is indeed necessary it is the view of this investigator that such research must consider the responsive nature of education, thus avoiding broad generalisations. Rather than the standardisation anathema to the values underlying this study, such research must aspire to position the individuals whose lives and experience comprise education at its core. Thus in order to support and develop the findings outlined during the initial classroom observation and interview stages of this research it is suggested that further case studies based on this model be conducted in a range of school types. While preferable in relation to specific studies regarding approaches to Macbeth and Shakespeare, this is particularly pertinent with regard to broader observations of systemic structures and their implications for the learning experience. As such, development in this regard should include case studies concerning a variety of curricular areas.
Central to further consideration of such systemic issues will be investigation with regard to how educational structures and assessment can be redesigned to facilitate a departure from the acquisition of a defined standard and a move towards learning processes and student development as intrinsic to the educational experience. The difficulties encountered in attempting to introduce relatively modest steps in this regard (as seen in relation to the Junior Certificate) underline the importance of extensive consultation and collaboration with teachers. As outlined thus far inherent to any proposed structural reform is the consideration of the teacher as a creative professional. While each teacher will possess a unique approach, so too must they as educators seek to respond to the specific needs of each student group they encounter. The multitude of possible relationships and individuals that therefore comprise education necessitates flexibility and latitude.

As orchestrators of the classroom environment and the variety of relationships and activities therein, teachers are ideally positioned to offer insight into the shape of such reform. Ascertaining the views of teachers with regard to implementation, as well as obtaining an understanding of their perceived challenges and reservations is therefore essential. As has been noted in this research the qualitative interview provides a powerful tool in achieving such insights; thus, an extensive programme of interviewing with teachers from a variety of backgrounds and school environments is recommended here. Although not utilised in the case of this research, the focus group could also prove a useful tool in this regard.

The focus group is much aligned with the collaborative ethos that structural reform should seek to facilitate. This instrument has been noted to create a democratising effect that challenges the power differential between participant and researcher. Participating teachers would therefore be afforded a greater sense of their value to the study as experts, empowering them as key members in the decision making process. Added to this, researchers would be afforded the benefit of experiencing teachers discussing the relevant issues with their colleagues, facilitating insights with regard to how concepts are challenged and modified in light of these interactions.

**Digital Storytelling**

The exploratory yet focused and rigorous approach is also advocated in the investigation of digital storytelling as a potential intervention, embodying the aspirations of proposed reform. As earlier noted the method utilised in this instance was inspired by the principles of critical purposive sampling and microethnography. This facilitated a detailed consideration of the questions occupying the research in
context, while offering an insight into the manner in which these merge and diverge with the broader educational landscape, in turn reshaping this landscape. In adopting such an approach the study identified a series of potential benefits associated with the process of digital storytelling, thus validating and laying the groundwork for further investigation in this area.

While this research utilised the case study of *Macbeth*, potential advantages identified offered promise for application in a variety of areas of the curriculum as an integrated creative and analytical learning activity. Although more extensive research is indeed necessary in order to elucidate and expand the findings established in this study, as has been outlined in relation to further examination of structural form, this must be conducted with sensitivity to the distinctive characteristics of the individuals, contexts and relationships. As such, broad generalisations in pursuit of a rigidly defined approach and hence the assumption that people are essentially interchangeable should be avoided.

Rather this researcher proposes the repetition of workshop sessions in the model of that utilised in this study. These should seek to investigate the implementation of digital storytelling in a variety of school types and scenarios, using the findings of this research as a blueprint for areas of further investigation and development. Teachers are the proposed coordinators of the digital storytelling intervention, future research should therefore be extended to include comprehensive collaboration with teachers. As opposed to the creation of a rigid or specific implementation design, this process should aspire to examine more extensively digital storytelling as a flexible instrument to be utilised and moulded by educators. It should therefore seek to establish a series of guidelines for the utilisation of digital storytelling that could be realised by teachers in a manner that best applies to their own teaching approach as well as the needs of their specific class group.

With the potential of digital storytelling having been established in this study by a researcher-led workshop, it is therefore proposed that any further investigation in this area include a series of workshops implemented by teachers themselves. These should be conducted as part of an iterative programme of workshops, qualitative interviews and focus groups. As in the case of systemic reform, it is the view of this researcher that this is the most appropriate strategy for ascertaining teachers’ views, ideas and reservations with regard to digital storytelling, as well as including them as collaborators in the research and design process.
Modest Interventions (VLEs and Captioned Videos)

While at its outset this study may have sought to address challenges experienced by teachers and students through the development of specific technological interventions akin to *A Conversation With Sir Ian McKellen* and other resources identified in the literature review, insights afforded throughout the research and during the digital storytelling workshop in particular underlined the inadequacy of such a delineated and generalised response. Rather, as has been discussed extensively thus far, meaningful reform can only be achieved through the redesign of education at a systemic level.

However, this would require an extensive and lengthy process of research, consultation, design and experimentation. Although it is undeniable that the current system is highly limited in regard to the quality and appropriateness of experience it can facilitate for students, in the absence of this irrefutably extensive reform, teachers and students are compelled to work within the realities of the existing curriculum. While the events of the digital storytelling workshop indicate numerous possible opportunities and advantages for student development, it is unlikely that such an activity would result in a significant degree of success as defined by the parameters of the Leaving Certificate exam. Moreover, the proportion of class time necessary for engagement in digital storytelling would render its inclusion in the current curriculum highly challenging.

Thus while acknowledging the meagreness of such a response in terms of meaningful educational reform, this section will recommend possible digital interventions for further investigation that could strive to address some of the challenges outlined by teachers and students in the early stages of this research. In this way it seeks to suggest possible avenues for improving the learning experience of *Macbeth* as defined by the current system.

**Time and Accessibility**

Throughout teacher interviews it was acknowledged by all participants that the introduction of digital resources could improve student’s engagement with the text, as well as addressing difficulties encountered with language and understanding of themes. However, teachers struggled to utilise such material, largely due to time pressures.
“I haven’t time. Like time is the thing and if I start going searching the internet for images of blood in Macbeth and trying to get them all together and not be shuffling when you’re not that IT friendly” (Teacher A) \(^{31}\)

This was compounded by the fact that teachers were unsure where to look for such material in the first place. Finally as observed in the classroom observations, when these resources were located, accessing them at their disparate locations (Youtube, DVDs, CDs) and presenting them to the class often proved cumbersome and ultimately time consuming, particularly when technical difficulties were encountered.

Undoubtedly difficulties in locating appropriate resources are not due to the fact that they do not exist. If we consider the selection of digital Shakespeare resources discussed in the literature review, including that produced by The Globe, Cambridge University Press, Shakespeare in Bits and The National Theatre UK to name a few, it is clear that a variety of quality resources are available to teachers and students. Rather it is locating the right material among the proliferation of less relevant options, in the vastness of the online environment that appears to be the issue.

This challenge was illustrated in research conducted by the National Theatre UK, into the use of their educational resources. In much the same way as the participants in this study, for those engaged in the National Theatre research, time was a significant factor. Teachers did not have the time to compare the quality, relevance or reliability of a vast array of material. While teachers were often put off by difficulties in locating resources, similarly the provision of too much material left them feeling overwhelmed and thus less likely to engage. As such accessibility and usability were found to be just as important as reliability and quality (Morris et al., 2012).

These factors were found to have a significant bearing on engagement and interaction with The National Theatre’s resources. While The National Theatre’s offering is highly rated by teachers in terms of quality, most were unaware of The National Theatre’s virtual resources, with two thirds being completely unaware of The National Theatre’s Learning Department. Indeed of all The National Theatre’s services, teachers were least likely to engage with the NT’s virtual resources (Morris et al., 2012). As such the research appeared to indicate that The National Theatre’s modes of distribution had serious implications for the level and quality of interaction with their material. The situation whereby learning resources were located in a

\(^{31}\) Teacher A, The Ursuline College Sligo, 31\(^{st}\) January 2014
series of disparate locations including itunes U, the National Theatre’s Youtube channel as well as their website was unappealing or simply impractical for the majority of teachers.

**Frog Virtual Learning Environment (VLE)**

As a response to this, The National Theatre has developed a virtual learning channel for the propagation of their learning content. While allowing all the relevant material to be brought together in a single web platform, the learning channel also has the advantage of being integrated into a virtual learning environment system (VLE), in this case Frog.

Simply put a VLE is an online system that allows teachers to share learning materials via the web. While there is no clear consensus as to how long VLEs have been in existence, (The Open University being a notable forerunner of the concept) the use of VLEs as a recognised educational tool was firmly established with the patenting of Blackboard in 2000, a popular commercial VLE still widely used. This was followed by an opensource equivalent, Moodle in 2001 (ofsted, 2009). Along with Moodle and Blackboard other VLE solutions including StudyWiz and Scholaris are also available in Ireland. Although specific figures regarding uptake are not available it is known that VLEs are in use in Irish higher level institutions including Blackboard in NUI Galway and StudyWiz in Meath VEC, however there is currently no data available on the use of VLEs in the Irish second level sector (Shortt, 2010).

**The Appeal of Frog**

The Frog system provides a series of advantages which likely informed its selection by The National Theatre. In comparison to other VLEs Frog is notable for its simplicity. Essentially the system allows teachers to create a personalised webpage using a drag and drop system, where they can bring together a variety of media in a meaningful way (Kemp, n.d.). The usability of the system is particularly significant when we consider the varying degrees of teacher confidence and ability with regard to the use of technology outlined in this research. Thus the provision of a system such as Frog requiring minimal instruction or IT knowledge in order to create attractive, usable learning environments is highly relevant. Added to this it has been noted in a study by the UK charity Nesta, that such readymade resources are

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32 Nesta is the National Endowment for Science Technology and the Arts, it is a public body designed to promote creativity, talent and innovation across a wide spectrum of areas and interests. (‘Our History | Nesta,’ n.d.)
favoured by teachers in the context of the UK school system (Ainsworth et al., 2012).

Also worthy of note is the quality of design work embodied in the Frog system. The attractiveness of the interface enables teachers to create an environment that not only offers facilities to students, but does so using a design that compels people to use the site and enjoy doing so (Kemp, n.d.). This negates the temptation to utilise the VLE as a mere ‘dumping ground’ for resources. While this approach may meet the requirement of enabling students to access content it is unlikely to hold student attention long enough for them to ostensibly benefit from their visit, thus it does little to enhance student learning experiences or engagement with the material (‘Why you should use a Virtual Learning Environment,’ 2010).

The Importance of Flexibility

Despite the readymade, ‘off the shelf’ nature of Frog, it offers a level of flexibility, allowing teachers to tailor the selection, combination and presentation of resources, thus adapting the learning material to their own teaching style and the specific needs of their class group. While teachers can easily add resources such as youtube videos, images, audio and RSS feeds, they also have the option of embedding live webpages and applications. This has significant implications for schools or teachers who may subscribe to additional web resources (The National Theatre's for example) as these can be integrated with other course work in the Frog platform. Using the FrogBricks facility teachers can create a variety of their
own resources and ideas (text, image, menu etc.) which can then be combined with relevant acquired materials. Examples of these may include learning objectives, thoughts of the week, key vocabulary, tasks due etc. (Kemp, n.d.).

The issue of flexibility is crucial, if we consider the findings of the classroom observations and interviews. Rather than the application of any one tool, what emerged as the most significant factor at this stage of the research was the pivotal role of the teacher in utilising a variety of instruments including verbal interaction, technology and print media in such a way as to create an environment in which students feel comfortable and stimulated to participate. As professional educators each teacher possesses their own unique style and approach, which is in turn moulded and informed by the specific needs of their class group.

The limitations of rigidly designed apps are underlined by the findings of research conducted by the UK Telecoms regulator Ofcom which found that while mobile apps are favoured by users for a variety of purposes, including gaming and downloading videos, less than half (48%) of those downloaded were actually utilised. It would therefore appear that the standalone app is limited in the benefits it can offer. As such this demonstrates the importance of ensuring a specific use is readily discernible by the user and that this can be seamlessly integrated into their everyday routine. When we consider the significance of time and curricular pressures outlined in the classroom observations and interviews, this is likely of even greater pertinence in the context of education.

As noted during the digital storytelling workshop, flexibility is also highly significant when we acknowledge that teaching is not merely concerned with the presentation and communication of information, but with building a rapport with individual students and the class group, thus creating an atmosphere in which students are comfortable as well as eager and willing to participate. As such, teachers are not passive consumers of prescribed resources, rather they are the orchestrators of a dynamic learning environment, within which a variety of resources will be utilised in a variety of ways. For example a specific teacher may perceive an element of a specific app as particularly conducive to engagement and understanding among their particular class group, added to this they may consider that this element may bear significant relation to another resource or material they themselves have created, in the context of their lesson plan. It is therefore paramount that such resources are adaptable enough to fit into a variety of schema. What are therefore required in order to support teachers in this process are versatile tools such as Frog that acknowledge their role in such a system rather than rigid, stand-alone apps.
A Curriculum-wide Approach

It may be likely that in order to fully harness the promise of VLEs such as Frog, a curriculum wide approach could be required. An added advantage of a curriculum wide adoption would be the unified system and method of accessing content which could potentially facilitate communication and thus possible collaboration between schools.

Moreover, if all schools adopt a single platform such as Frog this could encourage cultural institutions to tailor their content for such a system in much the same way as the National Theatre UK. This opens possibilities for collaboration between educators, the Department of Education and cultural institutions such as the Abbey to create or tailor content for schools. As such, this could present numerous possibilities for facilitating the connections between arts organisations and schools which was noted in Chapter Five to be largely deficient at present. This also has the potential to assist in fostering an atmosphere of collaboration in the context of education in a general sense.

However, as has been noted in the UK research conducted by Ofsted, in the stead of a curricular approach it is certainly possible for individual schools to utilise such resources to great effect. Added to this in the absence of learning content specifically tailored to the Leaving Cert curriculum, such schools would have greater access to a variety of high quality online resources and applications offering the potential for a more dynamic and engaging experience of Macbeth. However, it should be noted that Frog is not a free service. It has been suggested here as a resource for possible further investigation due to the advantages (outlined above) which it is perceived to possess over alternative available systems. Its adoption would thus require a degree of financial as well as logistical investment.

Resources Tailored for the Leaving Certificate

The Language Barrier

Although digital resources specifically tailored to the Irish Leaving Certificate are wanting at present, the provision of such materials could certainly present advantages for teachers who might avail of these in the design of their virtual learning environment. While potentially cultivating connections with arts institutions as described above such resources could seek to address the specific challenges encountered by Leaving Certificate students. As noted in both Chapter Four, one of the most prevalent challenges reported was the barrier presented by language.

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33 Founded in 1904, the Abbey is Ireland’s National Theatre
Students tended to perceive Shakespearean English as an entirely different language.

“I think because it’s a different language it can be kind of difficult to write about.” (Student 20)\(^{34}\)

While teachers noted that engagement with and progression through the narrative was significantly curtailed by the persistent need to pause in order for meaning to be clarified.

“the language maybe for starters. For some of them it’s ok, but that probably slows down the initial contact because you’re trying to explain it and maybe translate it to a certain extent.” (Teacher A)\(^{35}\)

**Captioned Videos**

In response to the issue of language this research proposes the possibility of investigation into captioned video performance. In this regard it suggests the development of a prototype enabling students to switch between contemporary and Shakespearean English captions. The prototype proposal outlined here utilises a video of Rupert Goold’s 2010 film version of *Macbeth* starring Patrick Stewart (Goold, 2010). The source code for this prototype can be viewed in Appendix 9.

\(^{34}\) Student Interviews, The Ursuline College, 25\(^{th}\) February 2013

\(^{35}\) Teacher Interviews, The Ursuline College, 31\(^{st}\) January 2014
The benefits of viewing a performance of Macbeth have been noted by teachers and pupils throughout this research. Attempts to introduce the dramatic nature of the text including the use of audio performances and some youtube video clips were noted throughout the classroom observations. One teacher adamantly remarked that students were significantly disadvantaged due to the fact that they were unable to experience a performance at their initial meeting with Macbeth. Certainly it appears likely that convenient access to a dramatic performance of Macbeth at the initial meeting of the work and throughout study would assist in informing students’ understanding of it as a play. It is the view of this researcher that the benefits of such a resource could be significantly enhanced by the addition of optional captions as described above.

Benefits of Subtitles
Subtitles have long been recognised as an effective tool in language learning. For many learners the prevision of text assists them in monitoring speech. As such, it provides instant feedback and positive reinforcement that can contribute to a sense of security for the learner (Zanon, 2006). The instantaneous nature of subtitle explanations are of great significance when considered in relation to factors outlined in the interview sessions. Students noted that translations were an essential tool in the facilitation of comprehension. Yet the prevailing method of a printed translation
index presented a number of difficulties. The proximity of translation was found to be of great consequence here. It was noted that this was a cumbersome process, which frequently disrupted narrative flow, in that students were constantly taken out of the drama in order to consult references. One student described writing such translations directly above the text in order to alleviate this problem somewhat.

In addressing these challenges surrounding student comprehension, the combination of video and textual content should seek to go further than the delivery of basic translation and as such strive to serve three functions: fostering understanding, retaining information and as noted above monitoring for meaning (Gunning, 2013). Added to this, dual texts such as that proposed have been shown to stimulate a variety of learners including those with an interest in visual representations as well as those who are easily daunted by long literary passages, inexperienced in terms of literature or simply desire a change in their choice of literary texts (Burwitz-Melzer, 2013).

The combination of the visual and textual elements may also have the effect of assisting students in their understanding of alternative cultures and traditions (Burwitz-Melzer, 2013). This has significant implications not only for surmounting the barriers presented by language, but in facilitating entry into the medieval world of Macbeth as well as the Elizabethan and Renaissance cultures that informed its conception. Students may thus acquire a greater ability to consider the influence of such factors on the events of the play. Certainly such a mix of cultural, linguistic, religious and political circumstances (in many ways highly alien to the typical student) present significant challenges, thus facilitation of understanding in this regard could greatly assist students in their exam preparation.

Added to this the combination of textual and video content may draw students to decode cultural symbols, inviting comparisons with their own culture and thus fostering a potential awareness of stereotypes (Burwitz-Melzer, 2013). While perhaps considerably less far reaching in this regard than the possible opportunities offered by digital storytelling, captioned video may present a potential response to the rigid black and white perception of characters and events found to be common among students. Moreover, it could potentially address issues related to the work of Langer discussed in the Chapter Five, whereby a tendency to regard information as rigid and context free can leave students ill-equipped to interpret alternative cultural frameworks.

The introduction of captioned video content as an accessible resource at the initial meeting and throughout the study of Macbeth, may also go some way in responding to concepts regarding ‘multiliteracies’. While retaining a largely passive,
broadcast form, more compatible with the existing curriculum than that of digital storytelling, this could address to a certain extent the current dominance of printed content in the classroom and hence issues relating to the development of ‘multiliteracies’. As such, while potentially generating greater appreciation of Macbeth as performance and arguably a more dynamic and enjoyable experience of the work, the combination of text and video could have great implications for the particular challenges students face in the context of the Leaving Certificate exam.

Prototype Design Considerations
Yet while the combination of text and video can provide a number of advantages it can also present challenges. Subtitles can often prove distracting to the viewer in that their fixed position at the bottom of the screen will inevitably cover a portion of the visual content. Added to this the viewers’ attention is continually drawn to read the text, rendering deep consideration of the visual and aural content difficult in some instances (Koolstra and Beentjes, 1999).

This certainly informs the suggestion that the proposed prototype should possess ability to switch between Shakespearean and contemporary English subtitles, as well as the option to turn captions off entirely, thus enabling students to consider the visual and aural content in more depth once a greater confidence in their understanding of the scene has been achieved. Moreover, this proposed prototype would seek to acknowledge these challenges in the visual layout of captions and presentation of the scenes.

As such, it is suggested that captions be displayed not simply in a fixed position at the bottom of the screen, but embedded into the aesthetic of the specific scene. This process whereby text is embedded as an integral element of visual content has become commonplace in a number of TV dramas such as BBC’s Sherlock (2010) and Netflix’s House of Cards (2013). Text is thoughtfully designed into the aesthetic of a scene. As such rather than a distraction they represent a significant addition to the storytelling (Zhou, 2014).
Further Development

While guided by existing research as well as the examination of precedents these proposals for modest intervention are purely speculative. As such, a programme of usability testing is required to appropriately assess their value in the specific context of *Macbeth* in the Leaving Certificate. It is the contention of this researcher that such investigation could be most appropriately achieved within a user-centred design approach. User-centred design (UCD) is a broad term used to describe a design model in which end-users influence how an artefact takes shape. The process strives to create a product that can be used as intended with minimum effort on the part of the user. Jenny Preece outlines this process as follows:

- Identifying needs and establishing requirements
- Developing alternative designs that meet those requirements
- Building interactive versions for communication and assessment
- Evaluation (Preece et al., n.d.)

In the case of both the VLE and captioned video proposals, progress has begun on the first three phases, with challenges and preliminary design interventions having been identified in the form of Frog and the video application design. However, User-centred Design is an iterative process, therefore requiring extensive work in relation to evaluation, before revisiting these initial stages. It is the view of this researcher that the most appropriate initial evaluation strategy in relation to both interventions
should consist of a series of think-aloud\textsuperscript{36} sessions with both teachers and students. In the case of the Frog VLE, this will require a template design, including sample resources. These should offer insights into how participants interact with the interventions as well as challenges encountered. Following these sessions participants should be invited to take part in focus groups; they will thus be afforded the opportunity to reflect on their opinions of the prototype. Through observation of the discussions at this stage individual ideas and perspectives may emerge and develop, informing how such designs can be refined and improved.

In the case of captioned videos this will likely involve revisiting the physical design of the application, while the VLE will require further consideration with regard to how the system can be moulded and effectively utilised. In this way ideas and guidelines with regard to implementation may be developed for experimentation in the next phase of evaluation. The process of evaluation can then be revisited within the classroom context, combining classroom observation and focus groups as the primary research instruments. In this way ideas with regard to how such interventions can be most effectively implemented may be elucidated and refined with educators, any challenges being subsequently acknowledged and addressed.

**Conclusion**

This research set out to explore the potential of digital media in rectifying the disjuncture between formal learning contexts and contemporary perceptions and expectations of narrative. As discussed in the review of literature and on several occasions throughout the dissertation, this contention was grounded in the theories of Haraway, Bruner and Pettitt among others regarding the relationship between media, thought processes and society. Such contentions are founded on the symbiotic relationship between our compulsion to create and subsequently to describe the world around us, as well as the role of media forms in this process. As indicated in the primary research question this study sought to explore this relationship, in the context of a perceived disjuncture, between a society dominated by the digital and an educational system dependant on print.

\textsuperscript{36} The think aloud was developed as a way of determining the thought development of a subject. It is a two stage process. During the first stage of the think aloud session, the user is requested to articulate all the steps of his or her actions as they navigate a given device or programme. The researcher offers minimal instruction. Probing at this stage must be as infrequent as possible, to avoid distraction of the subject. Should prolonged silence necessitate intervention on the part of the researcher, these should take the form of neutral cues, such as, "Keep talking". The second stage of the process involves a series of follow-up questions. While not the primary source of data, the questions asked at this point can serve to supplement any gaps or discrepancies that may have occurred in the first stage (Johnstone et al., n.d.).
Indeed, the findings of this research underline the extent and significance of this relationship, as well as elucidating the nature of a distinct dichotomy in this regard between education and broader culture. While a primary driver at the outset of this study was the exploration of how digital media itself could address this issue, observation of and engagement with teachers and students quickly revealed that this must be considered in the broader context of educational processes, values and aspirations. Although applications explored in the review of literature may enliven the learning experience to a certain extent, without considerable revaluation and reform of the education system, it is entirely probable that rather than addressing such issues the introduction of technology will merely continue to propagate them.

While certainly the dominance of print and relative absence of technology in the classroom was a significant contributor in relation to this issue, the fundamental dichotomy was one of values. Despite existing in the context of contemporary society informed by the ambiguity and transience of the digital, education continues to draw on a culture of print. It is thus dominated by the acquisition and evaluation of defined standards. As noted on numerous occasions the inadequacies of such a system are to a degree acknowledged by both educators and policy makers. However, despite an expressed desire to facilitate the development of skills such as creativity, collaboration, problem solving etc, reform has thus far been inhibited by a failure to recognise the fundamental shift in principles required. In order to realign the learning experience with that of broader society, education must move from the objective recognition of finished learning objects, towards a system that facilitates, acknowledges and rewards processes.

Similarly the use of technology is only helpful in this regard if it facilitates and embodies such values. As has been noted the best learning will not occur between student and interface, but through the relationships and interactions of students and teachers as well as among students themselves. Thus digital interventions within the proposed reformed system must depart from the passive, broadcast interaction, to the facilitation and augmentation of such relationships.

As has been noted throughout this thesis, media are not passive channels, but significant in the way they shape and inform the stories that can be told and who can tell them. Yet this is but one element in the reciprocal process of world creation. While certainly the pervasion of digital technology has powerful implications for the way we structure and describe our lives, technology must subsequently exist within this creation. Thus while the introduction of digital resources into learning processes may go some way to informing educational structures, it will also be shaped and confined by them. In order to effectively
address the ‘otherness’ of education, such structures must be reimagined, together with the use of technology within them. In a manner that mirrors the fluidity and ambiguity of digital culture, neither element can be considered in isolation, rather they must be understood as a holistic process. While a reformed educational approach may edify and prepare students for participation in a media saturated world, effective technology use can support and augment these learning processes. In this way formal learning contexts can not only be realigned to contemporary perceptions and expectations of narrative, but can become a fundamental component of the life stories we create for ourselves.
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### Appendices

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Appendix 1

Letter requesting participation in interviews
Dear XXXXXXX,

I am a former Ursuline student, having graduated in 2003. I am currently studying for my PhD at NUI Galway and I am writing to enquire about a possible collaboration with the Ursuline College in the development of my research. My work is primarily concerned with the way in which technology informs narratives and storytelling and the implications of this for education. How have the inevitable changes in perception, cognition and notions of identity influenced contemporary story structure as well as expectations of storytelling? What new stories have grown from this transition and to what magnitude do these, in turn, inform cultural identity as a whole? Considering this how can we actively engage with stories conceived in a different age and can technology facilitate this?

In order to address these questions I hope to carry out a case study into the study of Shakespeare’s Macbeth at Leaving Certificate level. Macbeth was chosen for several reasons; while the majority of students will study a Shakespeare play at some point, the relevance of the narrative is rarely appreciated at the time of study. Added to this anecdotal evidence suggests that Shakespearean dramas are widely considered the most challenging encountered by students, at second level in particular. Through a series of classroom observations and interviews with students and teachers I hope to identify the major areas of difficulty encountered as they progress through the play. In this way I hope to identify the requirements of both teachers and students and to address these in the design of an e-learning application.

This study is a continuation of my Masters research, which the Ursuline kindly assisted me with by arranging an interview between myself and my former Leaving Certificate English teacher, Ms. Mooney. My masters work received a mark of first class honours, as well as this the resulting project went on to receive a silver Digital Media Award in e-learning, first place going to commercial publisher EDCO.

Obviously I am conscious that teachers are under tremendous pressure to progress through the curriculum and I assure you that my research will not interfere with this. However I believe that my limited intervention could prove beneficial in encouraging students to reflect on their engagement with the play, thus enhancing comprehension. I am optimistic that my research and resulting e-learning application will prove a successful and practical supplement to narrative study and the school will be provided with copies of these.

I would be very much obliged if we could meet to discuss this collaboration further. My contact details are as above. I look forward to hearing from you soon.

Yours sincerely,

Ellen McCabe
Appendix 2

Informed Consent Forms

(Teacher Interviews)
Participant Information Sheet

Interviews
Date: 28th January 2013

Introduction:
This is an information sheet and consent form for English Leaving Certificate teachers. These teachers are invited to take part in research looking at whether the introduction of technology can improve students approach to their educational texts, titled ‘Living the Stories We Create: An Educational Response to Narrative in the Digital Age’

Name of Principal Researcher: Ellen Mc Cabe

Name of Organisation: National University of Ireland, Galway
Project Name: Living the Stories We Create: An Educational Response to Narrative in the Digital Age

Invitation to take part in the study:
You are being invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. This Participant Information Sheet will tell you about the purpose, risks and benefits of this research study. If you agree to take part, we will ask you to sign a consent form. If there is anything that you are not clear about, we will be happy to explain it to you. Please take as much time as you need to read it. You should only consent to participate in this research study when you feel that you understand what is being asked of you, and you have had enough time to think about your decision.

Thank you for reading this.

Purpose of the study:
This study will be looking at whether the introduction of technology can improve students approach to their educational texts. The study is looking at Shakespeare's Macbeth as an example and so is mainly interested in 5th and 6th year secondary school students and their teachers. You have been selected as you are currently teaching Macbeth. We wish to interview you about your experience of teaching Macbeth.
Taking part – what it involves:

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect your rights in any way.

The interviews will last approximately 10mins. You will be interviewed individually by the Principal Researcher (Ellen McCabe). The interview will be audio recorded digitally, but you will not be identified by name on the tape. Interviews will be carried out on school grounds, in a semi-public space.

Confidentiality:

All information that is collected about you during the course of the research will be kept strictly confidential and will not be shared with anyone else. The information collected in this research study will be stored in a way that protects your identity. A typed copy of the interview recordings will be created for further study. We will store the original recordings securely for 7 and a half years after which they will be destroyed. Results from the study will be reported as group data and will not identify you in any way.

Summary:

This project is entitled: Living the Stories We Create: An Educational Response to Narrative in the Digital Age. It is a study looking at whether the introduction of technology can improve students approach to their educational texts. It is up to you whether you take part or not. If you decide to take part you are still free to withdraw at any time and without giving a reason.

You will be given a copy of the information sheet and a signed consent form to keep.

If you are unclear on any points regarding the research please do not hesitate to contact:

Ellen McCabe,
XXXXXXXXXXXXXXXXX,
XXXXXXXXX,
XXXXXXXXX,
XXXXXXXXXXXXXXXXXX

If you have any concerns about this study and wish to contact someone independent and in confidence, you may contact 'the Chairperson of NUI Galway Research Ethics Committee, c/o Office of the Vice President for Research, NUI Galway, ethics@nuigalway.ie

Thank you for taking part in the study
CONSENT FORM

Title of Project: Living the Stories We Create: An Educational Response to Narrative in the Digital Age

Name of Researcher: Ellen Mc Cabe

Please initial box

1. I confirm that I have read the information sheet dated 28th January 2013 for the above study and have had the opportunity to ask questions.

2. I am satisfied that I understand the information provided and have had enough time to consider the information.

3. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my legal rights being affected.

4. I agree to take part in the above study.

Name of Participant Date Signature

Researcher Date Signature

(Please return this copy if you wish to participate)
CONSENT FORM

Title of Project: Living the Stories We Create: An Educational Response to Narrative in the Digital Age

Name of Researcher: Ellen Mc Cabe

Please initial box

1. I confirm that I have read the information sheet dated 28th January 2013 for the above study and have had the opportunity to ask questions.

2. I am satisfied that I understand the information provided and have had enough time to consider the information.

3. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my legal rights being affected.

4. I agree to take part in the above study.

Name of Participant     Date    Signature

Researcher      Date     Signature

(Please keep this copy)
Appendix 3
Informed Consent Forms
(Student Interviews)
Participant Information Sheet

Interviews
Date: 28th January 2013

Introduction:
This is an information sheet and consent form for 5th year students and their guardian(s). These students are invited to take part in research looking at whether the introduction of technology can improve student's approach to their educational texts, titled 'Living the Stories We Create: An Educational Response to Narrative in the Digital Age'

Name of Principal Researcher: Ellen Mc Cabe

Name of Organisation: National University of Ireland, Galway
Project Name: Living the Stories We Create: An Educational Response to Narrative in the Digital Age

Invitation to take part in the study:
You are being invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. This Participant Information Sheet will tell you about the purpose, risks and benefits of this research study. If you agree to take part, we will ask you to sign a consent form. If there is anything that you are not clear about, we will be happy to explain it to you. Please take as much time as you need to read it. You should only consent to participate in this research study when you feel that you understand what is being asked of you, and you have had enough time to think about your decision.

Thank you for reading this.

Purpose of the study:
This study will be looking at whether the introduction of technology can improve students approach to their educational texts. The study is looking at Shakespeare's Macbeth as an example and so is mainly interested in 5th and 6th year secondary school students. You have been selected as you are currently studying Macbeth. We wish to interview you about your experience and opinion of Macbeth.

Taking part – what it involves:
It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If
you decide to take part you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect your rights in any way.

The interviews will last 10-20mins. You will be interviewed individually by the Principal Researcher (Ellen Mc Cabe). The interview will be audio recorded digitally, but you will not be identified by name on the tape. Interviews will be carried out on school grounds, in a semi-public space and during school hours. Interviews will be carried out a time that has as little impact as possible on your academic routine as possible.

Confidentiality:

All information that is collected about you during the course of the research will be kept strictly confidential and will not be shared with anyone else. The information collected in this research study will be stored in a way that protects your identity. A typed copy of the interview recordings will be created for further study. We will store the original recordings securely for 7 and a half years after which they will be destroyed. Results from the study will be reported as group data and will not identify you in any way.

Summary:

This project is entitled: Living the Stories We Create: An Educational Response to Narrative in the Digital Age. It is a study looking at whether the introduction of technology can improve students approach to their educational texts. It is up to you whether you take part or not. If you decide to take part you are still free to withdraw at any time and without giving a reason.

You will be given a copy of the information sheet and a signed consent form to keep.

If you are unclear on any points regarding the research please do not hesitate to contact:

Ellen Mc Cabe,
XXXXXXXXXXXXXXXX,
XXXXXXXXXXX,
XXXXXXXXXX,
XXXXXXXXXXXXXXX

If you have any concerns about this study and wish to contact someone independent and in confidence, you may contact 'the Chairperson of NUI Galway Research Ethics Committee, c/o Office of the Vice President for Research, NUI Galway, ethics@nuigalway.ie

Thank you for taking part in the study
CONSENT FORM

Title of Project: Living the Stories We Create: An Educational Response to Narrative in the Digital Age

Name of Researcher: Ellen Mc Cabe

Please initial box

1. I confirm that I have read the information sheet dated 28th January 2013 for the above study and have had the opportunity to ask questions.

2. I am satisfied that I understand the information provided and have had enough time to consider the information.

3. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my legal rights being affected.

4. I agree to take part in the above study.

Name of Participant     Date    Signature

Name of Participant's Guardian(s)   Date    Signature

Researcher     Date    Signature

(Please return this copy if you wish to participate)
CONSENT FORM

Title of Project: Living the Stories We Create: An Educational Response to Narrative in the Digital Age

Name of Researcher: Ellen Mc Cabe

Please initial box

1. I confirm that I have read the information sheet dated 28th January 2013 for the above study and have had the opportunity to ask questions.

2. I am satisfied that I understand the information provided and have had enough time to consider the information.

3. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my legal rights being affected.

4. I agree to take part in the above study.

Name of Participant     Date    Signature

Name of Participant's Guardian(s)     Date    Signature

Researcher     Date    Signature

(Please keep this copy)
Appendix 4

Informed Consent Forms

(Digital Storytelling Questionnaire)
Participant Information Sheet

Digital Storytelling Workshop
Date: 10th March 2014

Introduction:
This is an information sheet and consent form for 5th year students. You are invited to take part in research looking at whether the introduction of technology can improve student’s learning experience and understanding of their educational texts, titled ‘Living the Stories We Create: An Educational Response to Narrative in the Digital Age’

Name of Principal Researcher: Ellen McCabe

Name of Organisation: National University of Ireland, Galway
Project Name: Living the Stories We Create: An Educational Response to Narrative in the Digital Age

Invitation to take part in the study:
You are being invited to take part in a research study. Before you decide whether or not to participate, it is important for you to understand why the research is being done and what it will involve. This Participant information Sheet will tell you about the purpose and benefits of this research study. If you agree to take part, we will ask you to sign a consent form. If there is anything that you are not clear about, we will be happy to explain it to you. Please take as much time as you need to read it. You should only consent to participate in this research study when you feel that you understand what is being asked of you, and you have had enough time to think about your decision.

Thank you for reading this.

Purpose of the study:
This study will be looking at whether the introduction of technology can improve student’s learning experience and understanding of their educational texts. You recently participated in a digital storytelling workshop. We would like to use the work you created in this workshop in our study. We would also like to invite you to complete the attached questionnaire on your experience and opinion of the workshop.

Taking part – what it involves:
It is up to you and your parent(s)/guardian(s) to decide whether or not to take part. If you do decide to take part, you will be given this information sheet to keep and be
asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect your rights in any way.

The questionnaire will take approximately 15-20 minutes to complete.

Confidentiality:

All information that is collected about you during the course of the research will be kept strictly confidential and will not be shared with anyone else. The information collected in this research study will be stored in a way that protects your identity. We will store the original questionnaires securely for 7 and a half years after which they will be destroyed. Results from the study will be reported as group data and will not identify you in any way.

Summary:

This project is entitled: Living the Stories We Create: An Educational Response to Narrative in the Digital Age. It is a study looking at whether the introduction of technology can improve student’s learning experience and understanding of their educational texts. It is up to you and your parent(s)/guardian(s) whether you take part or not. If you decide to take part you are still free to withdraw at any time and without giving a reason.

You will be given a copy of the information sheet and a signed consent form to keep.

If you are unclear on any points regarding the research please do not hesitate to contact:

Ellen McCabe,
XXXXXXXXXX,
XXXXXXXX,
XXXXXXXXXX,
XXXXXXXXXXXXXX

If you have any concerns about this study and wish to contact someone independent and in confidence, you may contact the Chairperson of NUI Galway Research Ethics Committee, c/o Office of the Vice President for Research, NUI Galway, ethics@nuigalway.ie

Thank you for taking part in the study
CONSENT FORM

Title of Project: Living the Stories We Create: An Educational Response to Narrative in the Digital Age

Name of Researcher: Ellen Mc Cabe

Please initial box

5. I confirm that I have read the information sheet dated 28th January 2013 for the above study and have had the opportunity to ask questions.

6. I am satisfied that I understand the information provided and have had enough time to consider the information.

7. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my legal rights being affected.

8. I agree to take part in the above study.

Name of Participant     Date    Signature

Name of Participant's Guardian(s)   Date    Signature

Researcher      Date     Signature

(Please return this copy if you wish to participate)
CONSENT FORM

Title of Project: Living the Stories We Create: An Educational Response to Narrative in the Digital Age

Name of Researcher: Ellen Mc Cabe

Please initial box

5. I confirm that I have read the information sheet dated 28th January 2013 for the above study and have had the opportunity to ask questions.

6. I am satisfied that I understand the information provided and have had enough time to consider the information.

7. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my legal rights being affected.

8. I agree to take part in the above study.

Name of Participant     Date    Signature

Name of Participant's Guardian(s)   Date    Signature

Researcher      Date     Signature

(Please keep this copy)
Appendix 5

Interview Questions

(Teachers)
1. Can you describe the process of teaching a Macbeth? How do you go about presenting it to the class? What in class activities do you do? How do you analyse it with them?

2. What challenges does teaching Macbeth present?

3. What is the general feeling among students about studying Macbeth?

4. How do they relate to the story of Macbeth?

5. Once they’ve studied it, does their attitude change?

6. What do find are the big challenges for students studying Macbeth?

7. Are they forthcoming in class discussions?

8. How do you convey the visual and performative nature of Macbeth?

9. You use some videos in your class? Do you find this helpful?

10. Is it challenging to locate those kind of resources?

11. Does finding or showing them in class present any challenges?

12. Do you think the Leaving cert encourages students to bring in their own interpretation or be a bit more creative in their answers?

13. Do students understand Macbeth more as a performance or as an educational text?

14. How often do students express their own opinions regarding Macbeth?
15. Do students ever draw on external sources or material that is not prescribed when analysing Macbeth?

16. In your opinion, do students feel Macbeth is relevant?

17. Do you feel Macbeth is relevant?

18. Do you think many students revisit Macbeth after the Leaving Cert?

19. Do you feel digital media has affected the way students engage in class?

20. Do you feel digital media has affected the way students approach their educational texts?

21. (If yes to 14) Has this created any new challenges?

22. (If yes to 14/15) Have you had to adapt your approach to accommodate these?

23. (If yes to 14/15) Do you think the course reflects these?

24. Do you think integrating a broader range of media forms into the curriculum could benefit students?
Appendix 6

Interview Questions

(Students)
1. You are studying Macbeth in class at the moment. Can you tell me a bit about the stuff you do in class?

2. Did you know much about Macbeth before you started?

3. Are you enjoying it so far?

4. What do you think of the story of Macbeth? Do you like it?

5. There is a lot of vivid imagery in Macbeth, is it challenging to visualise this while reading it?

6. When you think of Macbeth what do you think of printed text or people on stage?

7. Do you visualize the play when you read it?

8. Do you think the story of Macbeth has meaning today or is it more of its time?

9. Are the characters in Macbeth realistic?

10. What do you think of Shakespearean language?

11. Have you ever seen Macbeth performed? Did you like it or If not would you like to?

12. What kind of challenges does studying Macbeth present? Can you tell me a bit about them?

13. Why do you think you study Macbeth?
Appendix 7

Digital Storytelling Workshop Questionnaire
Digital Storytelling Workshop Questionnaire

1. Briefly describe what you did during the Digital Storytelling workshop.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2. What did you like about this exercise? Please explain why.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

3. What didn’t you like about this exercise? Please explain why.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

4. What did you learn from this exercise?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

5. Did creating your Zeega make you think about the text differently? If so how?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
6. Do you feel you had a greater understanding of the text once you had created your Zeega? Please explain your answer.


7. Did you find it difficult to come up with your own interpretations of the text? Please explain your answer.


8. What elements of the text were important to you when creating your Zeega?


9. What did you think of the character of Macbeth? Was it difficult to depict what he was feeling?


10. Did you like working as a group for this exercise or would you prefer to work alone? Please explain your answer.


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11. Do you think this is a worthwhile exercise? Please explain your answer.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________


________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

13. Would you like to see more exercises like this integrated into the curriculum? Please explain why you would/ wouldn’t.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Thank you for taking the time to complete this questionnaire.

Please return along with your consent form
Appendix 8
Proposal and Cover Letter
(Digital Storytelling Workshop)
Dear XXXXXXX,

As I am sure you will remember earlier this year I conducted some research with Ursuline students and teachers studying Macbeth. The results of this research proved extremely illuminating and I would like to thank you and the school for being so accommodating.

In light of my findings I have designed a workshop, which I believe could prove extremely beneficial in addressing some of the challenges experienced by students while studying Macbeth as well as developing skills with a variety of beneficial applications. The workshop will introduce students to digital storytelling. Through this medium students will be invited to think critically, to develop first person narratives as well as creative interpretations of literary works. I have included a proposal for this workshop, for your review.

As outlined in the proposal, this workshop would be particularly beneficial for Leaving Certificate students undertaking study of a Shakespearean text, however I am aware of the time constraints on students approaching exams. I would therefore suggest that this workshop would be suited to transition year students.

The workshop would be conducted by me with an assistant taking notes on proceedings, but not engaging directly with the session. The events of the workshop, the student’s response and engagement will form an important part of my research.

Is this something that would be of interest to you, your teachers and students? I would love to hear your thoughts on this and how you think it could most appropriately fit into the student’s timetable. My contact details are as above. I look forward to hearing from you soon.

Yours sincerely,

Ellen Mc Cabe
Workshop Title: Introduction to Digital Storytelling

Presenter
Ellen Mc Cabe
Email: XXXXXXXXXXX
Tel: XXXXXXXXXX
Huston School of Film & Digital Media
NUI Galway

Abstract
The purpose of this workshop is to introduce students to digital storytelling. This workshop will be made up of two sessions. The first session will take place over two hours. During this first session students will learn how to create first person narratives and creative interpretations through sound, text, still and moving image, using the cloud based application Zeega. The second session will also take place over approximately two hours depending on the number of students participating. During this session students will be drawn to reflect on and interpret their creative choices through in-class presentations.

Intended Audience
Leaving Certificate stream or transition year secondary school students

Presenter Biography
Ellen Mc Cabe is a PhD candidate on the Digital Arts and Humanities programme at NUI Galway. Her research is concerned with the way in which technology informs narratives and storytelling and the implications of this for education. Her paper presentation entitled Storytelling and the Dissolution of Categories was well received at last year’s International Conference of Theatre Studies. Her teaching credits include e-learning module leader on the Digital Media MA and lecturer on Imaginative Responses to Film for the MA in Production and Direction, both at NUI Galway.

Agenda
• A brief introduction and outline of the events of the workshop.
• Background to digital storytelling, how it developed as well as the principles and technologies involved
• Introduction to Zeega
  o How it is used
  o Its various features
  o A demonstration of pieces created using Zeega
• Basic exercise to familiarize the students with Zeega. Students will be asked to create a Zeega based on ‘the most beautiful place they have been’. The presenter will then take them step by step through the different features in order to create this. Students will be provided with a printed outline of this tutorial for their own reference. On completion of this exercise students should have a good knowledge of how to use Zeega.
• Students will now be asked to create a Zeega on their own. This Zeega will be based on the famous ‘dagger’ soliloquy from Shakespeare’s Macbeth.
• Before students begin this task the presenter will explain the background and context of the speech and the group will watch a clip of this soliloquy being performed. The group will then go through the text of the speech. The presenter will clarify meaning and answer any questions the students may have, before facilitating a discussion of various emotions, concepts and images this speech might evoke or convey.
• Students will then commence their Zeegas, using a variety of media to convey their interpretation of the speech.
• Students will be asked to complete their Zeegas, along with a brief description of their work. They will be asked to outline the choices they made, what they were trying to convey, the media they used to achieve this and why they think this is effective.
• In the next session each student will present their Zeega along with their descriptions
• Students will be invited to comment and ask questions regarding each presentation
• Following the presentations the class will discuss what they learned from the process and their views on digital storytelling

Audio/ Visual Requirements

Each student will need a computer with internet access. Ideally the presenter will have access to a projector, in order to demonstrate the use of Zeega and show examples of pieces created using Zeega. The Zeega software utilised during the course of the workshop is freely available online.
Appendix 9

Interactive Video Application Source Code
In this instance video captions were created using the HTML5 video framework, Popcorn.js. Popcorn.js is essentially a javascript library that allows users to import and display remote data on screen with relative ease. The data in this case are text captions conveying both contemporary and Shakespearean English.

```html
<!DOCTYPE html>
<html manifest="macbeth.ibook"><head>
<link href="macbethStyle.css" rel="stylesheet"/>
<script src="jquery.js"></script>
<script src="popcorn.js"></script>
<script>
document.addEventListener("DOMContentLoaded" , function () {
    var popcorn = Popcorn('#ourvideo');
    var showSubtitles = true;
    /* to allow the display of the video and captions the element #ourvideo, referring to the Macbeth video and the variable showSubtitles, referring to the captions were created. In order to add functionality, an event listener (EventListener) was added to the page. This ensures that once the page is loaded the showSubtitles variable is created, thus defining whether the captions are enabled and that the HTML element containing the video (#ourvideo) is passed to the Popcorn Library.*/

document.getElementById('captions').addEventListener('click', function () {
    //toggle subtitles
    //showSubtitles = !showSubtitles;
    //if (showSubtitles) {
    //    popcorn.enable('subtitle');
    //} else {
    //    popcorn.disable('subtitle');
    //}
    if($("#infoWrapper").is(':visible')){
        //$("#infoWrapper2").hide();
        }
    else {
        $("#infoWrapper").show();
        $("#infoWrapper2").hide();
    }
}, false);

document.getElementById('captions2').addEventListener('click', function () {
    if($("#infoWrapper2").is(':visible')){
        //$("#infoWrapper").hide();
    } else {
        $("#infoWrapper2").show();
        $("#infoWrapper").hide();
    }
}, false); /* Two buttons are displayed to the user labelled 'Shakespearean' and 'Contemporary'. Two div containers were created, 'infoWrapper' for the display of Shakespearean captions and 'infoWrapper2' in order to display captions in contemporary English. It was therefore necessary that when the button entitled 'Shakespearean' is clicked by the user that the div entitled 'infoWrapper' is displayed and 'infoWrapper2' is hidden entirely, with the opposite applying in the event that the 'Contemporary' button is selected. In order to achieve this, the button labelled 'Shakespearean' was given the element identifier 'captions'. In order to give the button functionality an event listener (EventListener) was added to the element 'captions'. This gives the instruction that in the event that the button labelled 'Shakespearean' is clicked and the infoWrapper div is already visible (i.e. the Shakespearean captions are already showing) then the infowrapper div should be hidden (thus removing all captions from the video. The event listener also specifies that if the button labelled Shakespearean is clicked and the infoWrapper div is not visible (i.e. either no captions are visible or the contemporary captions are on display) then infoWrapper should be made visible and infoWrapper2 should be hidden, therefore ensuring that only Shakespearean English captions are visible.

The element identifier 'captions2' refers to the button entitled 'Contemporary'. A similar event listener has been assigned to this element, ensuring that contemporary titles are hidden in the event that they are currently on display, however if it is the case that they are not on display when this button is clicked then Shakespearean

37 “HTML5 is a core technology markup language of the Internet used for structuring and presenting content for the World Wide Web.” (W3C)

38 “JavaScript is a dynamic computer programming language. It is most commonly used as part of web browsers, whose implementations allow client-side scripts to interact with the user, control the browser, communicate asynchronously, and alter the document content that is displayed.” (Flanagan and Ferguson)
captions are hidden and contemporary captions only are shown. In this way the user can conveniently switch between Shakespearean and contemporary subtitles or chose to turn these off entirely./*

popcorn.subtitle({
  start:25,
  end: 27,
  text: "How goes the night boy?",
  target: 'infoWrapper',
  fade: 500
}).subtitle({
  start:25,
  end: 27,
  text: "How goes the night boy? test",
  target: 'infoWrapper2',
  fade: 500
}).subtitle({
  start:27,
  end: 29,
  text: "The moon is down",
  target: 'infoWrapper',
  fade: 500
}).subtitle({
  start:27,
  end: 29,
  text: "The moon is down test",
  target: 'infoWrapper2',
  fade: 500
}).subtitle({
  start:29,
  end: 31,
  text: "I have not heard the clock",
  target: 'infoWrapper',
  fade: 500
}).subtitle({
  start:29,
  end: 31,
  text: "I have not heard the clock test",
  target: 'infoWrapper2',
  fade: 500
}).subtitle({
  start:31,
  end: 33,
  text: "And she goes down at twelve",
  target: 'infoWrapper',
  fade: 500
}).subtitle({
  start:31,
  end: 33,
  text: "Doesn't the moon usually set at twelve?",
  target: 'infoWrapper2',
  fade: 500
}).subtitle({
  start:33,
  end: 35,
  text: "I take 't 'tis later, sir.",
  target: 'infoWrapper',
  fade: 500
}).subtitle({
  start:33,
  end: 35,
  text: "I think it's even later",
  target: 'infoWrapper2',
  fade: 500
}).

*/ two target div containers entitled 'infoWrapper' and 'infoWrapper2' were inserted to allow the display of captions. The timeline position and duration of these captions, as well as their visual location on the screen are outlined here */

<script src="http://code.jquery.com/jquery-latest.min.js" type="text/javascript"></script>
Appendix 10

Glossary of Terms
Glossary of Terms

ASTI – The Association of Secondary Teachers in Ireland (ASTI) is Ireland’s main second-level teachers union, representing 18,000 teachers ('ASTI: Overview,' n.d.).

Categorical thinking - Categorical thinking involves assigning rigid categories to people or things (e.g. male/ female, rich/ poor) and then using these categories to define the people or things to which they have been assigned, even when it is inappropriate to do so.

Constructivism - Constructivism is an approach to teaching and learning based on the premise that cognition (learning) is the result of mental construction. Knowledge is not passively received from an external source, but is created by reflecting on our experiences. In this way we construct our own understanding of the world, fitting new information together with what we already know. Learning is therefore a process of adjusting our mental models to accommodate new experiences. Constructivist theorists support the notion that people learn best when they actively construct their own understanding. ('Constructivism: Constructivist Theory And Social Development Theory,' n.d.).

Critical Purposive Sampling – Purposive sampling relies on the judgement of the researcher when it comes to selecting the units (e.g., people, cases/organisations, events, pieces of data) that are to be studied. Usually, the sample being investigated is quite small, especially when compared with probability sampling techniques. Critical purposive sampling utilises this approach in exploratory, qualitative research in order to assess whether the phenomenon under investigation is worthy of further research ('Purposive Sampling', 2012).

Digital storytelling - Digital storytelling is a loose term that can broadly be described as the process of combining a variety of media to create a coherent narrative using technology (Banaszewksi, 2005). Digital stories usually contain some mixture of computer-based images, text, recorded audio narration, video clips, and/or music.

Divergent thinking - is a thought process or method used to generate creative ideas by exploring many possible solutions ('Divergent Thinking' n.d.).

ESRI – The Economic and Social Research Institute (ESRI) is an independent research group that supports understanding of economic and social change. Its work informs public policy making and civil society in Ireland ('A Message From The Director | ESRI' n.d.).

Factual fiction – Factual Fiction is a literary genre which, broadly speaking, depicts real historical figures and actual events using the storytelling techniques of fiction.
FÍS – FÍS is a film project for primary schools in Ireland that explores film as a medium of expression in relation to the arts, and introduces children to aspects of the film-making process (‘About | FÍS Film Project,’ n.d.)

Fordism – Fordism is a specific stage of economic development in the 20th century. It is a term widely used to describe the system of mass production that was pioneered in the early 20th century by the Ford Motor Company and its associated political and social order in advanced capitalism (Jessop, n.d.)

Grinds – This is a term referring to private tuition

Grounded theory – Grounded Theory is a method of inquiry in which the researcher derives a general, abstract theory of process, action, or interaction grounded in the views of participants in a study.” (Creswell, 2013). This process involves using multiple stages of data collection and the refinement and interrelationships of categories of information (Charmaz, 2014). The goal is to develop a theory that emerges from and is therefore connected to the very reality that the theory is developed to explain.

Knowledge-able - Michael Wesch describes this as a process of moving students from being knowledgeable to ‘knowledge-able’ or from being mere consumers of information to being able to find, sort analyse and even create meaning (Wesch, 2014).

Microethnography - Microethnography seeks to address large social and organisational issues through the observation and analysis of small moments of human activity and interaction. It is typically concerned with the understanding of process in action, with human interaction and activity being observed naturally as they occur within specific contexts or institutions (McDermott and Erickson, 2000).

Mindlessness – Mindlessness describes a situation whereby we become so accustom to a practice, activity or skill that we enact it without thinking. This often occurs when we learn something by practicing it so that it becomes like "second nature" to us. Difficulty arises in that if we’ve been successful, it won’t occur to us to think about it even when it would be to our advantage to do so. This form of mindlessness refers to situations whereby we hear or read something and accept it without questioning it (Langer, 2014).

Multiliteracies - Multiliteracies encompass a mastery of a variety of semiotic modalities including linguistic, visual, audio, gestural and spatial deemed to reflect more appropriately the demands of life in the contemporary era (Cazden et al., 1996).

Narratively Complex – This term refers to the contention by media theorist Jason Mittel that in the past two decades American television series in particular have begun to move away from the norms of episodic closure, towards what he terms ‘narrative complexity’. Rather than self-contained episodes such series typically
have a broad narrative arc spanning an entire (or even several) seasons. At the same time they capitalize on the serial format emphasising continual serial narration over episodically contained plots (Mittel, 2006). As such these shows tend to amass a complicated web of backstories and character relationships.

**NCCA** – The National Council for Curriculum Assessment (NCCA) is a research body that advises the Minister for Education and Skills on curriculum and assessment from early childhood to the end of second level. It engages with learners, teachers, parents and others to support innovation, as well as to use and share research as a basis for debate and advice on education (O’Shea, n.d.).

**OECD** – The Organisation of Economic Co-operation and Development (OECD) is an international economic organisation that seeks to provide a platform for the promotion of policies that will improve the social and economic well-being of people worldwide (‘About The OECD’, n.d.).

**PISA** – The Programme for International Student Assessment (PISA) is an international triennial survey which aims to assess education systems worldwide by evaluating the skills and knowledge of fifteen year old students (‘About PISA’, n.d.).

**Post-Fordism** – Post-Fordism is the idea that modern economies are no longer based on mass production for undifferentiated markets. Within the Post-Fordist model there are multiple markets with specialized needs and demands. These demands are met by both manufacturing and services industries through the development of digital technologies (Lawson et al., 2009).

**Process drama** – Process Drama is a method of teaching and learning drama where both the students and teacher are working in and out of role. In process drama pupils are not treated as learners, but as active agents making theatre happen (Bolton, 1999).

**State Examination Commission** – The State Examination commission is responsible for the development, assessment, accreditation and certification of the second level examinations of the Irish State (‘SEC Home,’ n.d.)

**The Epic Pattern** - The Epic Pattern is a long narrative poem that consists of a series of small fables that create a whole. This type of structure is primarily associated with oral storytelling exemplified in *The Odyssey* or *Beowulf* (Barthes and Heath, 2009).

**The Gutenberg Parenthesis** - the idea that the post-Gutenberg era (the period from, roughly, the 15th century to the 20th, an age defined by print textuality) was essentially an interruption in the broader arc of human communication. This theory espouses the idea that we are now, via the discursive architecture of the web, slowly returning to a state in which orality (conversation, gossip, the ephemeral) defines our media culture (Garber, 2010).
The Junior Cert/ Certificate – The Junior Cert or Certificate is an exam carried out upon completion of the Junior Cycle level of Irish second level education. This exam is usually taken after three years of second level education, with students typically taking 9-13 subjects including English, Irish and Mathematics ('Junior Cycle English,' 2013).

The Leaving Cert/ Certificate – The Leaving Cert or Certificate is the final examination in the Irish second level school system. This examination takes place after a minimum of two years preparation, with students having the option of taking an additional “transition” year immediately after the completion of the Junior Certificate. These years are referred to collectively as ‘The Senior Cycle’. The Leaving Certificate is used for the purpose of selection for further education, training and employment. Students typically take between six and eight subjects. If the student is following the established Leaving Certificate Programme they must take at least five subjects, including Irish ('Established Leaving Certificate,' n.d.).

The Leaving Cert Applied - The Leaving Certificate Applied is a two-year programme designed for those students who do not wish to proceed directly to higher education or for those whose needs, aptitudes and learning styles are not fully catered for by the other two Leaving Certificate programmes (Established and Vocational). Participants in the Leaving Certificate Applied are mainly engaged in work and study of an active, practical and learner-centred nature ('The Leaving Certificate Applied,' 2014).

TUI – The Teachers’ Union of Ireland (TUI) is a trade union organising teachers and lecturers engaged in post-primary and further education. The TUI represents 14,500 members('TUI,' n.d.)