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Exploring digital stories as research in higher education
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Abstract
The use of digital storytelling (DST) as a research methodology is gaining momentum. This approach is described as a visual methodology which can be positioned as a form of narrative inquiry and an alternative to an interview. This article explores the use of DST to capture student voices within higher education by outlining recent literature in this area and implications for researchers. It concludes by suggesting that there is significant room for more discussion of how digital storytelling can be used as a method of research to gather the feedback and voices of students. The implications for future researchers concern the complexity of both the method and the analysis, alongside the need for stringent ethical practices concerning the use of images and the potential impact of the storytelling on the research participant.

Introduction
Since the 1990s, the use of digital storytelling (DST) has steadily increased in an attempt to combine different ways of storytelling with the emergence of new digital media tools. The traditional roots of DST can be traced back to the University of California at Berkeley's Centre for Digital Storytelling, founded in 1993 by Dana Atchley, Joe Lambert and other artists in the San Francisco region (McLellan, 2006). Its aim is to provide a novel platform to empower and give voice to individuals or groups who are often overlooked in mainstream culture (Clarke & Adam, 2010). In its traditional form, digital storytelling refers to the process of developing personal narratives based on certain life experiences. Those stories are supported by a combination of text, audio recordings, images, music and animations to create short films with duration of typically two to five minutes (Benick, 2012; Davis, 2011). Due to the great variety and different applications, DST exists in numerous different formats, from multimedia online videos to image-only stories, podcasts or blogs entries, all of which contain some form of narrative produced and shared digitally (Clarke and Adam, 2010; Nilsson, 2008). Consequently, it has been adapted in various academic and non-academic fields, such as an educational tool, a research method, a therapeutic medium or to increase community engagement (Clarke and Adam, 2010). The most common feature of recent approaches refers to the agency of the storyteller as editor, and the use of software which enables this.

In this article, digital stories are defined as a collection of still images with accompanying audio or textual narration, and used as data in student voice research within higher education. Student voices (from a student sample) are now routinely captured through a range of methodologies within higher education, including institutional surveys, teaching evaluations, and action research (Austen 2018). The objective of this type of research is often quality assurance and enhancement with the overall aim being an improved student experience (Searle 2010). However, there are associated aims which align with a social justice agenda, and explore differential
student outcomes and inequity in higher education (Mcleod 2011). Digital storytelling in higher education is generally regarded as beneficial for enhancing teaching and student learning (Benick, 2012), including as a social pedagogy (for example, to build help relationships during online learning) and as an inclusive assessment (Jenkins and Gravestock 2013, Lowenthal and Dunlap 2010, Gravestock and Jenkins 2009). More recently this approach has been used in the capture of student voices, particularly those that are often hidden or marginalised. This article explores this particular context and then outlines implications for social researchers who may be interested in utilising an innovative methodology which has potentially emancipatory benefits for participants.

**Literature Review**

A literature review was conducted to identify academic articles published between January 1993 and December 2017 to explore: how the method of DST impacts on student voice; how DST has been used as a research methodology by and with students; and the ways DST can be used as a tool for process or impact evaluation in higher education. Within these databases, 193 articles were identified as relevant to the defined impact areas. Thirty-one were put through a rigorous process of data extraction, (adapted from Saks and Alsop 2012) which ranked each on two criteria: quality of the research (zero to three) and relevance to the study (zero to three). 17 sources that scored between four and six in total have been included in the literature review, and thus, form the basis of this discussion.

The literature review highlights that the majority of research within this contained search has focused on how digital storytelling is used as a platform to empower marginalised student voices. Digital stories are collated from students as part of scholarly inquiry, institutional research (research which moves the institution toward strategic goals) or as a pedagogic tool to build belonging and communities within learning environments. The storytelling process provides students, particularly 'historically marginalised' students, a chance to 'author and inscribe their own social and cultural truths' (Benmayor 2012 p. 507) and to 'challenge how they have been socially and historically marginalised' (Stewart and Ivala 2017 p. 1170). The accessibility and inclusive format of the digital story has also been used specifically for providing feedback for organisational change (Paiewonsky 2011) and as an assessment method in higher education (Jenkins and Gravestock 2013). In addition, the collated digital stories of students are often used to challenge perceptions, for example regarding specific student identities (migrant students - Benick 2012) or student behaviour (drinking cultures - Burnett et al. 2015).

The literature review also highlighted challenges in the production of student digital stories, namely assumptions about digital capability (Callens and Elen 2015, Riberio 2016) and the labour intensive support required to ensure completion (Hoggan and Militello 2015, Clarke and Adam 2010). Importantly, the ethical considerations of digital storytelling appeared as a consistent theme. Due to the nature of DST, the outcomes are often very personal and emotional stories. Stacey and Hardy (2011), for example, conducted a mixed-method study with newly qualified nurses who created digital stories to reflect on their previous practical experiences and shared their stories with final year nursing students. In this article, participants reported the process of creating such stories as challenging, as they often displayed highly personal experiences to an unknown audience, which students felt placed them in a
vulnerable position. Since many of the stories also showed very emotional content, the educationalists collaborating with the researchers in this project recommended that these stories should only be created and shared in ‘sensitive and safe learning environments’ (ibid. p.162), in order to keep students and workshop facilitators safe.

Researchers have a responsibility to carefully assess whether potential participants are suitable for the project or if participation may cause any harm. Dush (2012) illuminates on this ‘ethical complexity’ (p. 628) in her article on sponsored DST by highlighting the ‘vulnerability’ of participants in so-called ‘fiduciary relationships’ (p. 633) and addresses how the personal nature and the ‘motives’ behind the story can ‘make it difficult for a subject to give genuinely informed consent’ (p. 633). Gubrium et al. (2015) also found that the support provided by researchers within DST workshops can shape participants’ voices and ultimately, the outcome of their stories. Thus, they advocate that researchers should ‘carefully reflect on power dimensions inherent in the participatory process’ (ibid. p.1610).

Protecting the confidentiality of the storyteller is equally important, especially if the emotional content of the story might have negative consequences. Audio recordings within the stories themselves may reveal the identity of the storyteller if strategies are not adopted to account for this. However, some participants mentioned that they see the ‘ability to publically share their completed stories as opportunities’ (p. 1611) and feel empowered by the process. Gubrium et al. (2015) further argue that, as digital stories evolve over time, it is difficult to collect consent for release at the beginning of the research project. As a result, the authors suggest that the release decision should not be a ‘one-time process’; it should rather be ‘woven throughout a project' (ibid. p.1612), in which the final release decision should be made at the end of the project, when participants know the actual outcome of their stories.

**Implications for Researchers**

The literature scoping of the use digital storytelling for capturing student voices provides the background for discussing how this ‘emerging method for narrative research’ (Kim 2016) could be adopted as a research methodology within higher education, or within broader social inquiry.

The analysis of digital stories as research data is positioned within qualitative inquiry as a variant of visual research methods. However, digital stories can contain audio narration, visual images and sections of text which position this methodology as multimodal storytelling (Kim 2016). They are also first person narratives controlled by the storyteller and do not involve a negotiation of ‘relational space’ between researcher and participant (Bach 2012). The digital story would be defined as the ‘topic’ rather than a ‘resource’ (Harrison 2002) but fails to fit neatly into traditional descriptions of visual methodologies.

Researchers attempting this approach should consider their epistemological framework and pre-define the nature of the ‘discourse’ (e.g. student voice), ‘narratives’ (e.g. student stories) and relationships to ‘experiences’ (as social constructs). The techniques of narrative inquiry can provide some grounding, especially in consideration of the importance of the whole story and the weight of the component parts. Fundamentally, researchers need to acknowledge that stories can be fictionalised or embellished and will change dependant on the reinterpretation of experiences by the storyteller and the storytelling conditions (e.g. intended
audience). Individual stories (or narratives) have limited power, but as a collective discourse there is more scope for influence. A theoretical grounding, for example the use of a postmodern rationale for the fluidity of discourse (Derrida 1988), is important to formulate at the outset. In relation to student voice research, it is assumed that a student's story represents their own truth however this is analysed as a social construct. Whilst researchers could corroborate accounts across different stories (for example, of teaching practices within a course cohort), it is more important to consider the impact of experience, how this has been described in the story, and why this might be the case.

**Methodology**

In contrast to visual methodologies which utilise existing visual material, this approach requires the research process to create visual data to analyse (Alexander 2001). Participants may require some parameters to help guide their story (e.g. your first year at university, your experience of a work placement). These parameters should relate to research questions and should be crafted using the same concerns as, for example, qualitative interview schedules i.e. the use of prompts and the impact of the researcher on the data collection. Due to the features of multimodal storytelling, unstructured stories may be too complex to analyse coherently across a sample. The reflexivity of the researcher should be considered throughout and the limitations of setting parameters (and potentially biasing or guiding a story) need to be acknowledged alongside the agency of the storyteller.

In comparison to traditional visual narrative inquiry (see Jackson et al. n.d.) which relies on intensive relationships between researcher and participant - digital stories are controlled by the storyteller and researchers act as facilitators of the story rather than co-constructors. This is less resource intensive but does require the conditions for storytelling to be resourced and managed by the research project.

Due to the potentially personal and emotional nature of the stories created, digital storytelling should be undertaken within comfortable environments. Storytelling participants will need to be supported to use any prescribed software and will need time to draft the structure of the story and create the digital output. In previous projects, the author has used an initial two hour session with up to 10 participants to produce a complete or partial digital story, depending on the confidence of the participants. The first half of the session should provide an introduction to digital storytelling, specifically watching and critiquing the stories of others. It is important to discuss identity and self and any risks which might be associated with the stories viewed. When the context of digital storytelling is known, the second half of the session should provide time and space to develop a written story, storyboard, and to explore image selection (from internet stock or personal files). It is important to build in peer support and time for discussion between participants to help develop stories and test comfort levels. On reflection, participants should explore whether any edits or adaptations of their story are necessary. Importantly, consent should be obtained from participants to take part in the session and to use the stories as data on completion (obtained separately at the beginning and the end of the session). This approach is adapted from the story circle process which is a common approach for supporting digital storytelling.
The purpose of a story circle is to create a safe and comfortable space for participants to present the first draft of their stories and to allow participants to come together as a community in discussing and mutually mentoring each other in story construction. It is during the story circle that participants share in developing the generative themes of their stories, which can be used for dialogue within the digital storytelling group, and later fuel related public dialogue at the community level. The story circle serves as an opportunity for storytellers to find a way to resolve issues they may be facing in telling their stories.’

(Gubrium 2009 pg. 188)

In the student sessions, this support is then followed by an additional hour group session and one to one support as needed. Researchers will need to provide a room which has digital software and headsets for any audio recording.

Sampling

Access to a sample of digital stories will depend on where and how they are produced. There may be opportunities to access stories that have already been produced, for example within assessment conditions. Student's digital stories produced within, for example, personal development components of modules, could shed light on cohort experiences, common difficulties, and effective pedagogy. Staff must seek individual permissions from students for digital stories to be analysed as data in this way, and ethical approval from a Research Ethics Committee should govern this approach to consent.

Digital storytelling at scale is possible, but the resource implications of this are noteworthy. Embedding DST within the curricula may ensure a higher completion rate, and therefore sample, if permission to analyse is sought. However, supporting students to produce digital stories outside of taught provision, for example as part of student feedback mechanisms or student representation systems, requires extra-curricular student engagement in workshops or training sessions. This is a particular consideration for student samples that are harder to reach - the marginalised or under represented may require more thoughtful incentives. Positioning digital storytelling as a digital skill could be an incentive for participation. Providing an opportunity to voice a hidden story is another.

Marginalised or under-represented students become an obvious targeted sample for the production of digital stories and the benefits of researching this group using a potentially emancipatory approach is obvious. Whether the DST becomes a process or a product (Jenkins and Gravestock 2013) is an important consideration and care should be taken to consider the aims and objectives of collecting and analysing digital stories. With increased pressure in HE to support (and evaluate the support) of Widening Participation students, there is also a risk of research burden and exploitation of a told story. Specifically, it is unethical to collect stories and research the content without taking any steps to address issues raised, improve experiences or feedback to students on changes made.
As a qualitative method, research using digital storytelling does not aim for statistically representative findings. The research should aim to recruit a sample which produces data saturation and this is reported alongside the aims and objectives of the study. Often, only a small number of hidden narratives are needed to begin to build an alternative discourse. Digital storytelling can also be utilised effectively for exploratory projects and can provide the foundation for further investigation.

Use of Images

Digital stories can utilise the participants own photographs. Ethically, the participants should seek permission from anyone within the photograph to be included in the story. Digital storytelling software has access to all digital images which are available to use under a Creative Commons license. Participants searching the internet for images should also work within these restrictions. All images should be attributed at the end of the story (Adobe Spark will automatically do this if the images are found through the software). Support and guidance on copyright will need to be provided.

Anonymity and Confidentiality

There are DST techniques which will protect the anonymity of the participants. Participants can avoid using their own name or any defining feature in their story, including personal images. It is also possible to use a narrator for audio recording, or avoid audio recording altogether. These techniques need to be balanced with the authenticity of the story and discussion about self should be embedded into the start of any digital storytelling session.

As digital storytelling can be empowering for participants, all involved should be given the opportunity for their story as a whole to be published, alongside research findings. The defining principles of DST suggests that the content of the story should be controlled by the storyteller, however it is the responsibility of the researcher to discuss personal, institutional and researcher risk with all participants. Alternatively, the researcher can ensure that any content within the digital stories is viewed confidentially by the researchers only, and referred to anonymously in any reporting and write up, akin to preserving the anonymity of interviewees.

Consent

Due to the personal and emotional nature of the stories created, digital storytelling should only be used within well defined parameters of consent and withdrawal. Consent to produce, store, analyse as data, and publish the content (including specifics about where and when) should be discussed at the outset of the project and the participants should have the right to withdraw their stories from any public platform at any time. Researchers should be aware that participants are likely, and should not be discouraged from, completing the story and then deciding against publication or sharing of any kind. This point reinforces the features of control and agency in contemporary digital storytelling. An un-shareable digital story should be treated in the same way as withdrawn interview data, although, as there is still a
product, there is still some benefit and outcome for the participant. Consent and withdrawal should be a continued discussion for the duration of the project.

Analysis

Digital stories can produce audio (which can be transcribed like interview data), images (which can be analysed like the interpretation of photographs), and text (to which content analysis can be applied). Analysis can be conducted inductively (for example, using grounded theory) to look for emerging themes across a sample, or deductively, to specifically look for aspects of previous inquiry or new prepositions. Alternatively, the stories can be kept whole and analysed using narrative theorising to actively interpret and construct characters, setting/context, plot/events, activities and relationships, consequences, and purpose/motivations (Yamasaki, 2014).

Outputs

Researchers must seek specific consent to publish participant digital stories, outlining the digital platform and intended use. For example, participant stories can act as triggers for further conversations about the research and possible impact. These digital stories can be published alongside written reports of the methodology and analysis. It may also be appropriate for the researchers to produce a digital story of the findings as an alternative to written output. It is useful to obtain the original media file (e.g., mp4) rather than rely on a web link which is dependent on the longevity of access to the digital software and platform. The work of Austen and Jones-Devitt (2018) models this approach to research outputs.

Conclusion

The DST method is well used within public health, education and journalism as a means of exploring and empowering voices. This approach can operate across disciplines where there is need to explore voice, meaning, and self-directed/self-authored narratives (Rossiter and Garcia 2010). There is also a body of literature which identifies digital storytelling as a visual methodology which can be positioned as a form of narrative inquiry and an alternative to an interview. However, this review shows that the use of digital storytelling as a research methodology to capture the student voice within higher education is fairly limited to date. There is significant room for more discussions of how digital storytelling can be used as a method of research in order to gather the feedback and voices of students within institutions. The challenges for future researchers concern the complexity of both the method and the analysis, alongside the need for stringent ethical practices concerning the use of images and the potential impact of the storytelling on the research participant.

There is a significant research gap in how the method can be used for evaluation purposes as in this review no evidence was found of it being used for this purpose. This could be due to perceptions that digital storytelling is a platform to present or a space to communicate ideas. Yet, there is the potential to use DST to evaluate the effectiveness of a process (as an alternative to a qualitative interview), the impact of

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1 For examples of repositories of digital stories across discipline access:
https://digistories.co.uk/
https://www.patientstories.org.uk/
https://blogs.shu.ac.uk/steer/digital-storytelling-shu/
an initiative, intervention or activity (on students or others), or self-evaluation (for example, of a student's personal development). The utility of DST within longitudinal designs is also of interest to consider changing narratives or the reinterpretation of experiences over time.

Reference List


