

Exploring Video Literacy and the Practice of Educators: Videos, Vlogs, Videoconferencing and Holographic Teleportation

Julie-Ann Sime and Chryssa Themelis,
Centre for Technology-Enhanced Learning,
Educational Research Department, Lancaster University,
United Kingdom.
j.sime@lancaster.ac.uk c.themelis1@lancaster.ac.uk

Abstract: Video permeates everywhere online and is a key element for social media, marketing strategies, business communication, information dissemination and community building. We interviewed 21 educators from various disciplines within higher education and vocational trainers then analysed the data within the framework of informed grounded theory (IGT). IGT embraces data, categorises and correlates them with a literature review to critically reflect on and develop a theory of praxis – of how educators use visuals in teaching with technologies. The findings provide guidelines for educators, derived from practice, on how to use visuals (from a pragmatic perspective, including: static, dynamic and interactive tools). This paper focuses only on video literacy from the educators’ perspective. Video literacy includes videos, vlogs, video conferencing and holographic teleportation (holoportation) which is the next big step in learning technologies for transformational change. This paper is the outcome of research into the visual literacy and teaching practice of educators who are experienced in using technology enhanced learning tools and technologies. The findings can be used to improve teaching practice, inform policy makers and promote further research. The results are being disseminated via a MOOC entitled “Visual Literacy: Exploring educational practices and technologies”, if you want to learn more, join our MOOC: <https://mooc.viliproject.eu>

Introduction

Hillary Grigonis (2017, para.3) writes that video is a key component of social media and quotes Zuckerberg’s statement:

“Over the next three years, the biggest trend in our products will be the growth of video. When done well, video brings us closer together. We’ve found that communities formed around video like TV shows or sports create a greater sense of belonging than many other kinds of communities. We’ve found that Live videos generate 10 times the number of interactions and comments as other videos. But too often right now, watching video is just a passive consumption experience. Time spent is not a goal by itself. We want the time people spent on Facebook to encourage meaningful social interactions. So, we’re going to focus our products on all the ways to build community around the video that people share and watch”.

However, the communication of complex ideas or even emotions in video is not the same. The grammar of video has, until recently, resided within a few people – those who worked in TV stations or production houses - and that grammar was very much the product of a process that was both complex and expensive. As a result, the clear majority of people in the world are video illiterate. So, “It’s vitally important we teach people how to communicate their ideas in video, so they might speak the media language we are all increasingly using” (Rosenblum, 2012, para. 1).

To realise the importance of video today, a few statistics can help convey its usage and influence online: YouTube has over a billion users, almost one-third of all people on the internet ([YouTube](#)), nearly two-thirds of consumers prefer video under 60 seconds ([Animoto](#)), 500 million people are watching videos on Facebook every day ([TubularInsights](#)), 45% of people watch more than an hour of Facebook or YouTube videos a week

([WordStream](#)), Snapchatters watch 10 billion videos a day ([AdWeek](#)), 82% of Twitter users watch video content on Twitter ([Bloomberg](#)), 55% of people watch videos online every day ([MWP](#)), 59% of executives agree that if both text and video are available on the same topic, they are more likely to choose video ([MWP](#)), 54% of senior executives share work related videos with colleagues weekly ([TubularInsights](#)), almost 50% of internet users look for videos related to a product or service before visiting a store ([ThinkWithGoogle](#)), 4 times as many customers would rather watch a video about a product than read about it ([Animoto](#)), 55% of people consume video content thoroughly ([HubSpot](#)). People spend on average 2.6x more time on pages with video than without ([Wistia](#)).

Video and visual communications have also found a pivotal place in Higher Education and vocational training as educators make them central to the learning experience of students on distance learning courses and massive open online courses (MOOCs) (Brame 2015). Research into how to produce effective online educational videos has led to the creation of guidelines and recommendations. For example, Guo et al (2014) studied how video production effects student engagement in online educational videos through an analysis of 6.9 million video watching sessions in 4 MOOCs. The results suggest that short, personal, informal videos given by enthusiastic, fast talking speakers are more engaging than long videos of classroom lectures.

Rather than investigating technology design, this research examines the educational practices of teachers who are experienced in integrating technologies into their teaching. From an analysis of interview data, it examines current understanding of video and visual communications as used by educators in higher education, vocational training and business contexts, to develop a novel pedagogical framework for technology-enhanced learning. The framework has been derived from interviews with experienced educators and builds on theoretical and empirical literature from technology-enhanced learning field. Instead of generating recommendations, such as described in Guo et al (2014), this pragmatic research generates a theory of visual practice and a collection of resources, experiences and tools that can be shared with other educators in a MOOC on video and visual literacy. The research findings contained in this paper are a subset of the overall project results with a focus on the role of videos, vlogs, videoconferencing and holographic teleportation in technology-enhanced learning.

Methodology

This research is guided by Informed Grounded Theory, a systematic yet flexible approach that takes a practical problem and constructs a theory. It involves simultaneous data collection and analysis, uses constant comparison to conceptualise patterns in data, and is informed by a review of the literature (Thornberg, 2012; Dunne, 2011; Themelis, 2013). IGT is a pragmatic approach that uses theory but is not driven by theory. Quality is seen as practicality (effective use) or transferability (Anfara, Brown & Mangione, 2002); pointing to the fact that theories constructed are a part of a never-ending research refinement, facilitating future research. Transferability has nothing to do with the notion of “best practice” that can fit all models. It is more like a ‘collage’ of concepts that the researcher could examine, and practitioners may adopt in specific circumstances in accordance with their personal teaching method or learning objectives for specific target groups. Practicality of IGT concerns itself with social good and usefulness and therefore, it should be practically useful for professionals (Selden, 2005; Glaser & Strauss, 1967). For internal validity, this study utilised the following reliable procedures: (a) member checking (Lincoln & Guba, 1985), (b) researcher reflexivity and transparency (Charmaz, 2006), (c) rich and thick descriptions (Goulding, 2001), (d) literature review based on categories of the analysis (Dunne, 2011; Thornberg, 2012 & Themelis, 2013).

The participants that we interviewed were found in online communities, conferences or publications and invited to participate by e-mail with consent forms attached and information about the research project and the interview process. Those selected were very experienced in using visual tools, video or virtual spaces/agents. The 21 respondents came from a variety of backgrounds, coming from three continents and from a wide spectrum of disciplines. There were four from Greece, five participants from the UK, three from the USA, two from Norway Denmark and one from Mexico, Cyprus, Bulgaria, Turkey and Malaysia. They teach Image/vision science, media literacy, educational research, cognitive psychology, brain-based learning, educational technology, interdisciplinary human studies and vocational training. The participants were interviewed via Skype and three of the participants responded to the questions in writing. Questions in the semi-structured interviews focused on: their understanding and definition of visual and video literacies; the technologies and resources they use; and the reasons behind their use of visual technologies in teaching and communications. Using IGT to analyse the transcribed interview data, a number of themes were identified however only the themes relating to video literacy and video technologies are reported in this paper, in the next 4 sections. The educators interviewed claimed that video is an effective tool for

teaching and learning either in class, online or in flipped classes and they shared explanations, literature reviews, online resources and a lot of real-life examples.

Educators' Perspective on Videos

Why are people affected so much by videos? According to the "*Mirroring People: The Science of How We Connect to Others*", (Iacoboni, 2009,) when a viewer of a video watches someone smiling or performing a task, the same part of the brain is activated as if one experiences the feeling or does the specific task. In the same line of thinking Pentland (2008, 2010, 2012), argues for the importance of social signaling transmitted to others in face-to-face interactions but they are obvious on video as well. Video can help the viewer build trust or distrust with the content of the video based on four elements: Influence/similarity (the degree of similarity with the speaker), Mimicry (copying of emotions), Activity (increased activity indicates interest and excitement), Voice (clear and eloquent speech enhances the credibility of the speaker). Pentland's work focuses on social and face-to-face interaction and considers the next best thing, video conferencing, but his work seems to be an explanation of what viewers like when watching a video and how they connect with the speakers.

Therefore, educators use video to create a more human path for their teaching, by showing real life scenarios or eloquent speakers explaining a point of view. As participants in our study suggested, the benefits of video are well-summarised in the posts and resources of the [University of Queensland](#). Videos could:

a) Facilitate thinking and problem solving
b) Assist with mastery learning (active viewing)
c) Inspire and engage students: Wilmot et al (2012) shows that there is strong evidence that digital video can: increase student motivation, enhance learning experiences, raise attainment, develop the potential for deeper learning, develop learner autonomy, enhance team working and communication skills, provide a source of evidence relating to interview skills, provide learning resources for future cohorts to use, provide opportunities for staff development (p.3).

d) Offer authentic learning opportunities: a more human approach to teaching (people talking to people), by showing real-life scenarios or eloquent speakers explaining a point of view.

An innovative approach proposed by an interviewee, is presented by the Center for Teaching at Vanderbilt University where Cynthia Brame provides guidelines for producing "[Effective educational videos](#)" derived from research into educational multimedia and recent studies of MOOCs (Brame, 2015). For video to serve as a productive part of a learning experience, she considers three elements of video design and implementation to be important: cognitive load, non-cognitive elements that promote engagement, and features that promote active learning. Five recommendations are given: keep videos short and focused on learning goals; use audio and video in a complementary (rather than redundant) manner; highlight important ideas and concepts; enhance engagement by using an enthusiastic, conversational style; promote active learning (Brame, 2015).

Another important use mentioned by participants, are the [3D 360 virtual tours](#) that bring opportunities to explore cities, famous landmarks and buildings, museums, college campuses, and even outer space, e.g. explore the Imperial Palace in a virtual tour China's Forbidden City. You can learn how things are made, explore the human body or that of a life-sized whale, and visit theme parks (Rivas, 2010). The implications for education and professional training are huge. For example, universities use virtual campus tours so that students can see the location and premises before they visit. Finally, some employers now prefer a visual CV to a written CV, so new tools and guidelines are available for building CVs and online professional profiles to find the most suitable job (Stockdale, 2014). However, the advantages should be balanced with the potential disadvantages that may occur through unconscious bias, e.g. gender bias (Nair, 2018, Koch, D'Mello & Sackett, 2015).

Educators' Perspective on Vlogs

The National Commission on Writing (2006, p.15) stresses the importance of "thinking on the screen" as a key competence in the 21st century. Video literacy, visual literacy and visual thinking are becoming increasingly important in education, training and communications. Vlogs, or video blogging, are another way to make content more dynamic; similar to a blog but use video instead of text. Although not very widely used in educational setting, there is potential to contextualise information, and offer real-world learning. Educators use it for sharing stories, as a collaboration or reflection tool and for community building tasks as seeing someone's face on video promotes a

kind of social trust and personal connection. Other research on video-enriched learning (Ramirez-Martinell & Sime, 2010) maintains that personalised learning enriched by video has the potential to facilitate critical reflection in relation to performance, foster students' will to learn and boost their confidence, for example, when students studying choreography can review videos of their own dances they are provided with a new perspective (not previously accessible) that can be critically analysed through repeated viewing. Thus, synchronicity, asynchronicity and video production may be creatively used for different assignments and reflective purposes.

As an example, participants talked about Susan Gail Taylor's (2013) post in the digital pedagogy lab journal about vlogging that is one way to introduce dynamic content and technologically enhanced pedagogical techniques to students in a variety of disciplines, specifically composition. From student-created vlogs that focus on reflection, collaboration, and community building to teacher-created vlogs that focus on creative lessons and that introduce a spirit of play to the classroom, vlogs can be significant and practical learning tools; specifically, in the composition classroom, vlogs can teach students the power of visual communication and can allow them an informal way of exploring the composing process (Taylor 2013). According to Taylor (2013), Vlogging is not new in the world of pop culture and "places the writer in the center, articulates its theory, and develops its pedagogical system by assigning highest value to the writer and her imaginative, psychological, social, and spiritual development..... vlogs provide a digital means for self-awareness and reflection that Gombrich would refer to as the students' interest in pursuing their truths and intellectual progresses" (Taylor 2013).

As literate environments continue to evolve, the standards that students will be expected to express themselves, to participate and collaborate in these environments, and to demonstrate critical thinking skills will continue to rise as well. Vlogging is an ideal medium for producing knowledge and sharing digital stories, two concepts that have been popular with blogging and podcasting. It seems the most compelling reason to integrate vlogging in the classroom can be summed up by Michael Wesch, cultural and digital ethnographer at Kansas State University, who solicited student vlogs for his "Visions of Students Today" project. His goal was "to hear from probably the most important voice in the question of where to go next with education, and that voice, of course, is the students themselves." (Taylor, 2013). Wesch (2017) created a very popular YouTube channel with many videos that inspire and challenge the way students and educators think about education, e.g. "[The art of being human](#)". All in all, video can be a dynamic and powerful tool to motivate viewers, to engage them in collaborative tasks, reflect and build a more human, social path based on authentic, contextualised learning environments.

Educators' Perspective on Video Conferencing

An element of interactive tools is video conferencing as an integral part of VLS. Distance education is expanding in all continents, and the use of video has dominated the internet. Synchronous Video Communication (SVC) is used, more and more, in business circles and it can connect educators to students online and connect experts to students in class. The research participants and literature in the field (Themelis, 2013, 2014, 2017, Baxter, 2011, 2012) agree that SVC puts a human face on dialogue, and can be used to: explain difficult tasks (practical skills); role-play (language learning); promote dialogue and collaboration (problem solving task); revise content (personalised feedback); and build a community spirit (mimicry of thinking and behaviors). It helps students and educators to discuss expectations, and educators to enhance their feeling of professional salience, i.e. the feeling of doing a good job when putting faces to their online students. Emotional immediacy and emotional contagion is facilitated and is very much needed for all involved, to create the feeling of being part of a class in an online educational environment.

Themelis' (2013) research on videoconferencing discusses the human need for proximity through video technologies and explains the important role of tele-cognitive presence. Tele-cognitive presence as a learning process through video conference is presented in Figure 1. Tele-proximity is defined as online embodiment that explains how instructors and students are connected in synchronous networked environment via tele-operations. SVC creates a sense of place or a stage where online identities perform and highlights recent research on audio-visual signals in communication and team work (Pentland, 2012, 2008). The theory of tele-proximity is an extension of the Community of Inquiry Model (Garrison, Anderson & Archer, 2000) and a theoretical framework according to which learning objectives could be designed. Tele-teacher, tele-social and tele-cognitive presence could be facilitated with video-conferencing, if used effectively especially for small groups (Themelis, 2014). Although it is widely used in Africa for large groups as well, to address medical education demands. Transactional distance could be minimised and may be implemented to facilitate more synchronous, visual, and human options in distance education.

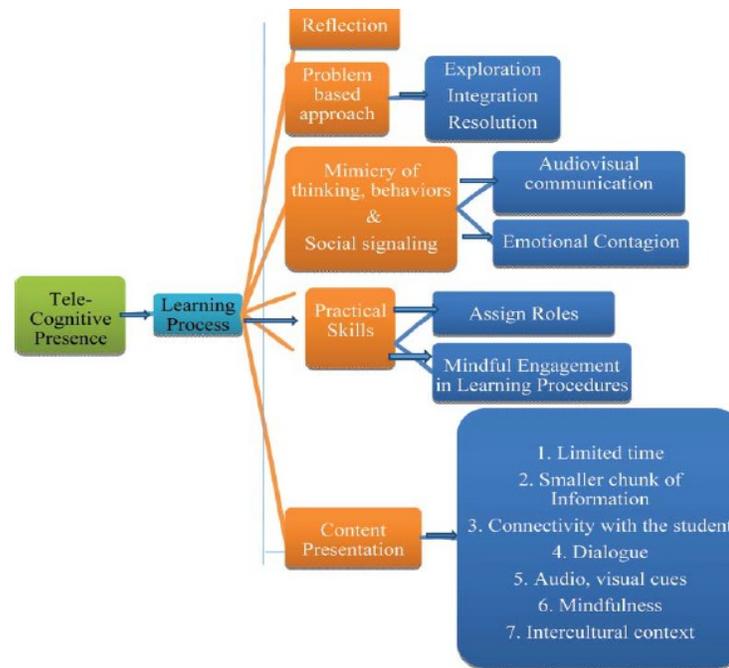


Figure 1. Tele-cognitive presence (Themelis, 2014).

Educators' Perspective on Holographic Teleportation

In the 21st century, holography as a new experiential approach, aims to unlock users from their 2D-limited world. So, the next step from video conference is holographic teleportation, or holoportation. This field, which needs further exploration and implementation in learning environments, offers contextualised and real-life human to human communication. In a TED talk in 2016, Alex Kipman (2016), a Microsoft inventor, talks about “The dawn of the age of holograms” and claims that despite spending many hours per day looking at screens, our interactions and connectivity remain limited. Kipman (2016) who researches into holographic teleportation, is the creator behind Microsoft's Kinect motion controller, which became the fastest-selling consumer device of all time. He points out that “we are like cave people in computer terms, we have barely discovered charcoal and started drawing the first stick figures in our cave”. Therefore, a new reality is needed, where we can come closer to each other activating and embracing our senses. Kipman considers holographic content as a step towards a more human path for technology, expanding our perceptions. Now that we can holographically transport ourselves, we need systems to recreate sensations to bring these experiences to life. Recent research on haptic gloves patented on microfluidic technology physically displaces the skin the same way a real object does when touched, closely replicating texture, shape, and movement. In short, full body sensation is no longer science fiction opening up new possibilities for learning and transformative change.

Holoportation could play a major role in all levels and many different fields of education. Educational research shows that it could be linked to the theory of embodied cognition, facilitating interaction and understanding because it can give the human brain a sense of immersion in the real world, receiving more realistic information (Invitto, Spada, and De Paolis, 2015). Holographic teleportation could be used to enhance (a) collaboration and interactivity, thereby enabling students to work with other students, teachers or experts worldwide in what feels like face-to-face interaction; and (b) educators' reach as educators can deliver lessons and lectures to multiple classrooms, across the globe, simultaneously. Holographic technology, and holographic teleportation, will take videoconferencing a step closer to a real-life experience.

Summary

To summarise, video is the new language that dominates the internet and business communication (Forbes, 2010). This research aims to constructively synthesise the research data and a contemporary literature review of the analysed data categories to explore the educators' perspective on video literacy and their use of video technologies in practice. Visually literate educators make use of video technologies such as videos or vlogs in their classroom or online to help students see real-life cases from different perspectives, engage more with content and motivate them to create their visual language for assignments because thinking, collaboration and reflection on screen are vital for teaching and business communication. Video conferencing has great educational advantages to facilitate learning and build social trust while holographic teleportation could enrich contextualization and real-life experience. More focused research is needed to enhance understanding of the video language and the potential of holographic teleportation (holoportation) for teaching and learning.

If you are interested in learning more about video and visual literacies come and join the second run of our MOOC: Visual literacies: Exploring educational practices and technologies in September/October 2018.

References

Anfara, V. A., Brown, K. M., & Mangione, T. L. (2002). Qualitative analysis on stage: Making the research process more public. *Educational Researcher*, 31(7), 28-38.

Baxter, J. (2011). *Public sector professional identities: A review of the literature*. The Open University, UK. Retrieved from http://oro.open.ac.uk/29793/47/Public_service_professional_identities_a_review_of_the_literature_2012.pdf

Baxter, J. A. (2012). Who am I and what keeps me going? Profiling the distance learning student in higher education. *The International Review of Research in Open and Distance Learning*, 13(4), 107- 129. doi: [10.19173/irrodl.v13i4.1283](https://doi.org/10.19173/irrodl.v13i4.1283)

Brame, C.J. (2015). Effective educational videos. Retrieved from <http://cft.vanderbilt.edu/guides-sub-pages/effective-educational-videos>

Charmaz, K. (2006). *Constructing grounded theory. A practical guide through qualitative analysis*. London, UK: Sage.

Dunne, C. (2011). The place of the literature review in grounded theory research. *International Journal of Social Research Methodology*, 14(2), 111-124.

Forbes. (2010, October 15). Executives embrace non-text world [online document]. Retrieved from http://images.forbes.com/forbesinsights/StudyPDFs/Video_in_the_CSuite.pdf

Garrison, D. R., Anderson, T. & Archer, W, (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(2-3), 87-105.

Glaser, B., & Strauss, A. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*, Chicago, IL: Aldine.

Goulding, C. (2001). Grounded theory: A magical formula or a potential nightmare. *The Marketing Review*, 2(1), 21-33.

Grigonis, H. (2017, November 2). Video is key, Facebook says as Instagram Stories, WhatsApp post big growth. *Digital Trends*. Retrieved from <https://www.digitaltrends.com/photography/facebook-video-a-focus-as-instagram-stories-grows/>

- Guo, P.J., Kim, J. & Rubin, R. (2014). How video production affects student engagement: An empirical study of MOOC videos. *ACM Conference on Learning at Scale (L@S 2014)*. Retrieved from <http://groups.csail.mit.edu/uid/other-pubs/las2014-pguo-engagement.pdf>
- Iacoboni, M. (2009). *Mirroring people: The science of empathy and how we connect with others*. New York: Picador.
- Invitto S., Spada I. & De Paolis L.T. (2015). Augmented Reality, Embodied Cognition and Learning. In L.T. De Paolis & A. Mongelli (Eds.) *Augmented and Virtual Reality: AVR 2015* (pp 125-134). Lecture Notes in Computer Science, vol. 9254. Cham: Springer.
- Kipman, A. (2011). The dawn of the age of holograms: Alex Kipman [Video]. TED Talk. Retrieved from <https://www.youtube.com/watch?v=1cQbMP3I5Sk>
- Koch, A.J., D’Mello, S.D. & Sackett, P.R. (2015). A meta-analysis of gender stereotypes and bias in experimental simulations of employment decision making. *Journal of Applied Psychology*, 100(1), 128-161.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.
- Nair, P. (2018, April 23). Don’t fall for quirky video CVs: Why this tech trend may be a diversity killer. Retrieved from <https://realbusiness.co.uk/hr-and-management/2018/04/23/dont-fall-for-quirky-video-cvs-why-this-tech-trend-may-be-a-diversity-killer/>
- National Commission on Writing (2006). *Writing and school reform*. Washington, DC: College Entrance Examination Board. Retrieved from http://www.collegeboard.com/prod_downloads/writingcom/writing-school-reform-natl-commwriting.pdf
- Pentland, A. (2008). *Honest signals: How they shape our world*. Cambridge, MA: MIT Press.
- Pentland, A. (2010, January 1). *Defend your research: We can measure the power of charisma* - Harvard Business Review. Harvard Business Review Case Studies, Articles, Books, Pamphlets - Harvard Business Review, January–February 2010 issue. Retrieved from <http://hbr.org/2010/01/defendyour-research-we-can-measure-the-power-of-charisma/ar/1>
- Pentland, A. (2012, April). The science of building great teams. *Harvard Business Review*. Retrieved from <https://hbr.org/2012/04/the-new-science-of-building-great-teams>
- Ramirez-Martinell, A., & Sime, J-A. (2010). Video-enriched learning experiences for performing arts students: two exploratory case studies. In J. O’Donoghue (Ed.), *Technology Supported Environment for Personalised Learning: Methods and Case Studies* (pp. 248-267). IGI Global.
- Rivas, K. (2010, January 5). 100 Incredible & Educational Virtual Tours You Don’t Want to Miss. Retrieved from <http://www.onlineuniversities.com/blog/2010/01/100-incredible-educational-virtual-tours-you-dont-want-to-miss/>
- Rosenblum, M. (2012, March 7). Teaching video literacy for a media revolution. *The Guardian*. Retrieved from <https://www.theguardian.com/media-network/media-network-blog/2012/mar/07/teaching-video-literacy-media-revolution>
- Selden, L. (2005). On grounded theory – with some malice. *Journal of Documentation*, 61(1), 114-129. <http://dx.doi.org/10.1108/00220410510578041>
- Stockdale, L. (2014, February 5). How to make a great video CV. *The Guardian*. Retrieved from <https://www.theguardian.com/careers/careers-blog/how-to-make-video-cv>
- Taylor, S.G. (2013, March 28). Vlogging composition: making content dynamic. *Hybrid Pedagogy*. Retrieved from www.digitalpedagogylab.com/hybridped/vlogging-composition-making-content-dynamic

Themelis, C. (2014). Synchronous Video Communication for Distance Education: The educators' perspective. *Open Praxis*, 6(3), 245–255.

Themeli, C. & Bougia, A. (2016, December). Tele-proximity: Tele-community of Inquiry Model. Facial Cues for Social, Cognitive and Teacher Presence in Distance Education. *International Review of Research in Open and Distributed Learning*, 6(17). Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/2453>

Thornberg, R. (2012). Informed grounded theory. *Scandinavian Journal of Educational Research*, 56(3), 243-259.

Wesch, M. (2017, June 2). The art of being human - welcome video [Video]. Retrieved from <https://www.youtube.com/watch?v=b39Mf-ZeyNw>

Willmot, P., Bramhall, M. & Radley, K. (2012). Using digital video reporting to inspire and engage students. Retrieved from http://www.raeng.org.uk/education/hestem/heip/pdf/Using_digital_video_reporting.pdf

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