LEARNERS AS CO-CREATORS OF KNOWLEDGE USING DIGITAL MEDIA

BY JORGE REYNA

T he evolution of digital technologies has reshaped the way we socialise (Facebook), learn (YouTube), find jobs (LinkedIn), shop (eBay) and collaborate online (Google Drive). These platforms and applications, prosumer electronics (e.g. digital cameras) in conjunction with the smartphones (2007) and tablets (2010) revolution have contributed to the Internet explosion (Reyna et al., 2018). A democratisation of digital media production has occurred promoting User Generated Content and creating opportunities and challenges.

Digital media in the form of videos, presentations and interactive material has been used to deploy instructional content for blended learning. The literature is abundant in that field, especially the last 5 years with the uptake of flipped learning in adult education. Learners need to engage with the content before the training session where active learning is the key

component of knowledge construction. This mode of instruction can be considered passive as learners engage watching or navigating the material posted online.

Learner-Generated Digital Media

A new trend emerged in the field of education is called Learner-Generated Digital Media (LGDM) as an assessment tool. In a nutshell, LGDM is digital media produced by learners to showcase what they have learned and to share with the world. The role of the learner moved from a passive recipient of content to an active producer. This practice includes the development for example of blogs, websites, digital stories, animations, videos and blended media. Research in the field of LGDM is considered in its infancy with a lack of solid theoretical foundations to implement in the classroom systematically (Hakkarainen, 2009).

Theoretical Underpinnings

Three different theoretical constructs have been used to explain how the learning process occurs when LGDM assignments are used. Semiotic theory (Hoban et al., 2015), the self-explanation effect of the multimedia learner (Johnson and Mayer, 2010), and the Internalisation effect (Hobbs, 2017). Preparing a storyboard for a digital media project using evidence-based information is the first step. Then, learners move to the planning of a multimodal representation of the content (audio, video, images, moving text, and so on). In the final step, which is the production workflow is when learners reinforce what they have learnt in the previous stages. Evidence of the value of LGDM comes from qualitative research approaches that are hardy scalable. There is an urge to design a rigorous mixed-methods approach to validate previous assumptions.

Advantages and Disadvantages of LGDM

The advantages of LGDM assignments include the development of professional

skills, research and inquiry, critical thinking, creativity and can motivate learners to further engage with the content. Research has pointed that LGDM can foster agency as learners feel empowered when showcasing what they learn to the wide community using video sharing services (YouTube or Vimeo). Additionally, digital media assignments promote group work and collaboration, time management, conflict resolution, understanding of diversity and can improve bonding within employees in an organisation.

Drawbacks of LGDM assignments are that they are time-consuming, learners are more familiar with writing tasks. On the other hand, digital media principles that govern the effective production of LGDM are not well-understood outside the creative industry disciplines. Copyright and intellectual property can be an issue if learners utilise copyrighted online content to produce their digital assignments.

Current models to implement LGDM for learning emphasise the technical aspect without considering the pedagogies and instructional strategies (Reyna and Meier, 2018). In education, there is a comprehensive model that considers pedagogies and technical aspects but it is complex and lacks application outside the discipline of education. There is an absence of a practical framework to guide the systematic implementation of LGDM assignments to guide trainers and trainees.

The Frameworks developed

At our institution, four frameworks to guide the systematic implementation of LGDM assignments have been developed and put into practice. The first model is the Digital Media Literacies Framework for Teaching and Learning that identifies the need to train students in three domains: Conceptual (storyboard), Functional (use of software/applications) and audiovisual (digital media principles).

The second framework is the Taxonomy of Digital Media Types for Teaching and Learning. This theoretical construct helps

The Learner-Generated Digital Media Implementation Framework

educators and students to visualise the skills required for the effective production of digital media for learning. It also helps educators to design the task (individual or group) and the weighting of the assignment.

The third framework is the digital media principles that are based on neuroscience, psychology, visual design and multimedia learning principles (Reyna *et al.,* 2018). This framework guide the training needs of learners, for example, layout design, colour theory, typography, use of images and C.R.A.P (Contrast, Repetition, Alignment and Proximity) principles.

The final framework is the LGDM implementation framework that guides educators and students on digital media assignments (Reyna & Meier, 2018). The model considers pedagogies, student training, video hosting, marking scheme, group contribution, feedback, reflection and evaluation (See diagram).

The experience
LGDM was implemented successfully at the Faculty since 2016, and currently, we have first, second and third year subjects implementing digital media for learning (14 subjects). We are engaged in research to determine how students self-regulate their learning when LGDM is used as an assessment tool. So far evaluation showed students have a positive attitude towards digital media assignment, they thought the digital media task was engaging, fostered learning, creativity, and as a result, they thought they gained additional skills such as effective communication in the digital space.

LGDM and your business organisation
The LGDM model can be perfectly used in corporate training to engage your employees with your company. As digital media production is a collaborative process, it can be used to bond within and across teams. For example, staff can create simple training material on the new policy, Work Health and Safety, a company showreel, promoting products and services, learning resources, and so on. Does not need to be a time-consuming task such a video or blended media. Instead, it can be an interactive Prezi, a whiteboard animation (PowToon), a blog post, and so on. The best resources developed can be posted on Twitter, and serve as a marketing strategy. This task could help new staff to learn more about the company, stimulate creativity, get to know their team members and develop a strong relationship with their co-workers. It will also have a benefit on further developing of digital media literacies within your employees.

We are currently developing a website for LGDM as an assessment tool called digitalmediaforlearning.org. This website will contain experiences from trainers and trainees with samples, tips, digital media training material and publications in the field of LGDM.

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Jorge Reyna is a lecturer at the Faculty of Science, University of Technology, Sydney, with 10 years of experience in university settings and 15 years in the digital media industry. He has a strong focus on learning design which considers pedagogies, visual design, usability, accessibility, multimedia learning principles, presentation quality, and the appropriate use of technology.