

RESEARCH ARTICLE

Exploring the Impact of Design Thinking-Based Digital Storytelling Activities on Transformative Learning Among University Students

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Abstract

Higher education institutions nowadays trying to adapt in a way to pedagogical approaches which demands creativity, critical reflection, collaboration and student engagement. In this context, the design thinking and digital storytelling have emerged as to promising educational approaches that can support student centred learning and innovation, while design thinking Was emerged as a promising a framework for creativity, empathy. And problem solving. Originally some fields of design thinking fosters educational context as it encourages learners to identify problems, generate ideas As integrating student centred transformative learning practises into higher education.

KEY WORDS

Design thinking, digital storytelling, transformative learning, student centred learning, Creativity, innovation.

INTRODUCTION

The rapid transformation of higher education has increased demand for innovative pedagogical approaches which support student engagement, creativity and critical reflection. Universities are no longer functioning disciplinary kno instead of that they are increasingly required to prepare students for complex academic in professional reality is which fosters adaptability, collaboration and reflective thinking.

Among such approaches design syncing is found one of the frameworks for fostering creativity, collaboration, end critical thinking. Alongside design thinking, digital storytelling has become an important educational practise and technology enhanced learning environments. Digital storytelling combines this narrative with multimedia elements Such as images, audios, videos and digital tools helps learners to express ideas, reflect on experience I'll communicate in creative ways. In higher education digital storytelling has been used to support

reflective learning, self-expression end engagement. The child told storytelling often provides learners with opportunities to connect academic content with personal experience creativity and audience awareness.

The integration of design is thinking and digital storytelling valuable especially for promoting transformative learning. Transformative learning commonly associated with Mezirov's theory which refers to process examination of learners of their perspectives and develop new ways of acknowledging themselves and the world. In higher education transformative learning is important because, it supports intellectual emotional and social development. Learning experiences that involve reflection, creativity and collaboration are often considered conducive the transformative learning. Design A sinking beast digital storytelling may create such experience by inviting students to collaborate with others, generate

solutions and create stories in their learning process.

The purpose of this study is to explore impact of design is singing based on digital storytelling activities and transformative learning among universities students. More specifically, did they investigate students perspectives of these activities, examiners how they influence reflection, creativity and collaboration which they support transformative learning. By addressing this topic, the study contributes to the literature on educational innovation and offers practical insights for higher education teachers, curriculum designers and the institutions which are interested in creating more engaging and transformative learning engagements.

LITERATURE REVIEW

Innovation in higher education.

Higher education had made significant changes in response to technological development, globalisation and shifting expectations regarding teaching and learning. Traditional teacher centred structure which often reflects the transmission of the content is increasingly being challenged by pedagogical approaches which prioritise student participation collaboration and authentic problem solving. As a result, innovation in higher education has become one of the essential areas of research and practise. Educational innovation may involve the use of digital tools, new form of assessment, interdisciplinary learning for some instructional models which encourage creativity and reflection of students.

Digital transformation uh has intensified the need for innovative teaching practises. Universities increasingly use digital platforms, multimedia tools and interactive technologies to support learning. However, the effective integration of technology into higher education demands more than usage of digital tools into practise. It requires pedagogical models which uses the technology in meaningful ways for deepening the learning and encouraging participation. In this respect, both design and thinking and digital storytelling can be understood as a innovative oriented approaches which reflects with contemporary education goals.

The design thinking in education

Designing thinking is commonly described as a human centred creative approach to problem solving. Design thinking often includes stages such as emphasising with users, defining problem, generating ideas, prototyping solutions, in testing them. The stages encourage learners to approach problem

from multiple perspectives and engage meaning making rather than task completion.

In higher education, design thinking has increasingly been used as a pedagogical approach rather than simply a professional design method. It may also encourage learners to connect theoretical concepts with real world issues by involving them in authentic and challenge-based tasks. When students work through the design thinking process, they are often demanded to gather information, comprehend the need of the user, solve the problems, provide solutions, receive a feedback and revise their ideas.

The use of design and thinking in higher education is not without challenges. Some studies show that students may struggle with the ambiguity and open ended of design thinking tasks. Other points out and that effective implementation requires careful scaffolding, time and instructor support. However, literature generally suggests that designing thinking can function as a powerful educational framework when it's meaningfully integrated into curriculum and supported by reflective learning activities.

Digital storytelling in higher education

Digital storytelling was first to practise of creating stories through the integration of narrative and digital media such as images, audios, videos and interactive tools. In educational settings digital storytelling has been widely recognised as a strategy for enhancing engagement, creativity and communication. By inviting students to create and share stories through digital means this approach allows them to combine academic content with personal voice and multimodal expressions.

One of the most important psychological strains of digital storytelling is connecting cognitions, creativity and reflection. Students who create digital stories are not only asked to present information but also, they try to interpret the experiences and choose what matters and consider how meaning is communicated to an audience. This process may deepen engagement with content and create opportunities for personal and social learning. Additionally, digital storytelling often supports multimodal learning which increasingly relevant in digitally mediated educational environments. It allows students use visual, auditory and narrative resources together which can represent their comprehension.

At the same time digital storytelling can also have some challenges which students may experience technical

difficulties in terms of uncertainty how to structure the narrative or anxiety about creating self-expression. Instructors may also need to invest time in designing clear guidelines, assessment criteria and Technical Support. However digital storytelling remains available educational approach because it can create rich opportunities for active and reflective learning environment.

transformative learning theory

Transformative learning is one of the most influential theories in adult and higher education. it's commonly associated with the work of Jack Mezirov, who described it transformative learning is a process in which individuals critically examine their assumptions through reflections and and dialogue. Rather than simply acquiring new information, transformative learning involves A deeper shift in how learners comprehend themselves and the world around them.

Transformative learning often begins with disorienting dilemma which experience or situation that challenges an in individuals was the waste of thinking. this may be followed by critical reflection exploration of alternative perspectives and eventually reorientation of beliefs or actions. in tertiary education transformative learning is particularly uh relevant because university learning is expected not only to develop disciplinary knowledge but also to support independent thinking, self-reflection and intellectual growth.

At the same time transformative learning is not always easy to observe because it's often involves internal reflection and shifts in understanding of self-reported perspectives. for this reason, studies of transformative learning often combine quantitative and qualitative approaches in order to capture both broad patterns and deeper learning experiences.

Linking design thinking, digital storytelling, and transformative learning.

All the design thinking, digital storytelling and transformative learning are often studied separately they are strong conceptual reasons to examine them together. design thinking supports emphathy, Problem framing, creativity, iteration in collaborative solution building. digital storytelling emphasises voice, narrative, multimodal expressions, reflection, and audience awareness. transformative learning, perspective transformation and meaning making. when combined designing environment in which students not only solve problems and create it with artefacts but also reflect on their assumptions and consider alternative perspectives and develop

deeper understanding of themselves and others.

For example, the emphasising stage of design thinking may encourage students to loosen and understand perspectives different from their own. the ideation and prototyping stages may support creativity end collaborative learning. when these processes are connected to digital storytelling students may be asked to transform their understanding in the narrative forum by representing voices and experiences through digital media and they can easily reflect the meaning of the issue they explore. such tasks may encourage both cognitive and emotional engagement which increased the possibility of transformative learning.

METHODOLOGY

Research design

The study employed a mixed method research. designed to explore the impact of design thinking based on digital storytelling activities on transformative learning among university students. a mixed method approach was considered appropriate because it allowed the researcher to examine students perspections through quantitative survey responses and depths of their experiences through qualitative reflections.

context of study

The study was conducted in the context of higher education which foxtel university students who participated in learning activity designed around design and thinking and digital story principles. the activity was integrated into a course and instructional model related to education and innovation a closely related field. the learning environment emphasises student's participation, creative problem solving and collaboration.

Participants

The participants of the study consisted the university students enrolled in higher education programmes. participants were selected using convenient sampling based on their access and participation in design and thinking based digital storytelling activity. the total number of participants in the survey phase was 10. in addition, five students provided open ended reflections and participate in short follow-up reflective responses to offer more detailed insights into their experiences.

Instruments

Data were collected primarily through an online questionnaire

administrator to be a Google forum. the questionnaire included both closed ended and open-ended items. the closed ended section used five points we strongly disagree to strongly agree. this item explores students' perceptions, of activity and influence on creativity, problem solving, collaboration and reflection. the open-ended section invited students to describe the most valuable aspects of activity, explain whether the experience that influenced their thinking and identify any challenges they encountered.

Data analysis

Quantitative data from closed ended survey items were analysed using descriptive statistics. Frequencies, percentages, means and standard deviations were calculated in order to identify overall trends in students' responses.

Qualitative data from the open-ended responses were analysed using thematic analysis. the researcher reviewed the responses multiple times and identify the recurring ideas and patterns and organised them into themselves relevant to transformative learning and educational innovation. the qualitative analysis was intended in the reach the statistical findings and offer a more nuanced understanding of student's experiences

RESULT

The section presents the findings of the study in relation to students' perceptions of design thinking with digital storytelling activities and extent to which these activities contribute to transformative learning. the findings were organised into 5 subsections

1. student's familiarity with design thinking and digital storytelling
2. students' perceptions of the activity
3. the activity's perceived impact on creativity collaboration and problem solving
4. indicators of transformative learning and challenges experienced by students
5. the main challenges experienced by students.

CONCLUSION

The study explored the impact of design thinking based on digital storytelling activities on transformative learning among university students. it was motivated by growing in need of

innovative pedagogical approaches in higher education and by the limited research examining the relationship between design and thinking, digital storytelling and transformative learning in the higher education context. the study investigates the students' perceptions of this activity and examine how they may contribute to the reflection, creativity, collaboration and problem solving.

The findings suggest that designing thinking based digital storytelling has potential function as a meaningful and student centred learning approach in higher education. students generally perceive the activity as engaging creative and useful for connecting the series with practice. the result also indicated that the activity may support important dimensions of transformative learning including reflection, self-awareness, active participation and open-minded perspectives,

Overall, the study acoustic design thinking based digital storytelling offers a promising pathway for promoting transformative learning in higher education. by combining empathy creativity, reflection, narrative and collaboration this approach can help students to become more active, reflective and engaged learners.

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