

Digital Storytelling for Character and Citizenship Education A Knowledge Forensics Approach

Chen Der-Thanq Victor, Wu Jing and Liang Wei Jhen

KEY IMPLICATIONS

- The D-ST_gT_iOR_iR_cM (Dilemma-Skills, guided Thinking, independent Thinking, Options, individual Reflection, collective Reflection, Making) design principles of the Knowledge Forensics Digital Storytelling (KFDS) approach fill the current research gap in digital storytelling.
- Tinkerable tension for collective reasoning is recommended as a pedagogical design for value-based decision making.

BACKGROUND

This project reports on two-cycle design-based research in the Singapore Character and Citizenship Education (CCE) primary context. Literature review suggests a constructive pedagogical approach in CCE learning, particularly with the focus on the development of criticality in students. However, it is found that intervention studies are generally lacking in the Singapore context with most studies being either policy studies or baseline research. There is thus a need for exemplary cases and the development of design principles. To tackle this issue, we proposed the KFDS approach with a set of STORM (Skills, Thinking, Options, Reflection, and Making) design principles to inform the research design of this project.

FOCUS OF STUDY

This research study has threefold objectives:

- To promote the facilitation of process-based and student-centred learning in CCE
- To explore KFDS as a pedagogical approach to promote criticality in CCE
- To develop a set of design principles of KFDS approach to supplement CCE

KEY FINDINGS

- Guided critical Thinking (DPT_g) can be designed as explicit teaching integrated with value-based choices and reasoning in the story circle. It facilitates the development of independent Thinking (DPT_i). The story circle videos provide evidence for identity, relationships and choices outcomes.
- Learning Options (DPO) can be designed as authoring choices, which enable the making of media artifacts. These artifacts provide evidence for identity outcomes.
- Learner Reflection (DPR) can be designed as individual Reflection (R_i) with value-focused questions, collective Reflection (R_c) upon these questions, and individual final reflection on the workshop. These reflection artifacts and dialogues provide evidence for identity and choice outcomes.

SIGNIFICANCE OF FINDINGS

The significance can be seen from the perspectives of theoretical and practical advancements. Regarding theory building, this study advances CCE theories by applying them in a local CCE context. It functions as an example of how researchers may adopt the proposed KFDS framework in their research contexts for further theory building.

This study also advances the pedagogical theories by proposing tinkerable tensions for collective reasoning for the choice outcomes. It explains how CCE goals can be attained through a carefully designed KFDS workshop.

Regarding informing practice, this study designs and refines both teachers and students' workshops with a complete activity outline, worksheets and other instructional resources. The established design principles and the activities guide practitioners who are keen to adopt KFDS in their teaching of CCE and other subjects. The study may also be useful references for policymakers (e.g., MOE CCE curriculum developers). They may consider integrating the complete KFDS or part of its design in the programme.

PARTICIPANTS

Participants in the study include 36 Primary 5 students (15 in Cycle 1 and 21 in Cycle 2) and two participating teachers.

RESEARCH DESIGN

This study adopts a generic design-based research model by McKenney and Reeves (2014). The implementation of the KFDS approach was carried out in two cycles. A generic workshop outline was further drawn for each cycle. Activities in the workshop integrated the instantiations of the proposed STORM design principles. The major production activities organize the workshop. These included the story ideation, story sketching and multimedia orchestration. The instantiations of critical thinking, learner options and learner reflection were integrated into activities such as story circles and one-minute paper.

REFERENCES

McKenney, S., & Reeves, T. C. (2014). Educational design research. In M. Spector, M. Merrill, J. Elen & M. Bishop (Eds.) *Handbook of Research on Educational Communications and Technology* (pp. 131–140). London: Springer.

About the authors

CHEN Der-Thanq Victor, WU Jing, LIANG Wei Jhen are with the National Institute of Education, Singapore.

Contact Chen Der-Thanq Victor at victor.chen@nie.edu.sg for more information about the project.

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