Scaling UP the Education Research: MAGICAL (SUPER-MAGICAL)
Use of Comics in Teaching Mathematics

Toh Tin Lam, Cheng Lu Pien, Lim Lee Hean and Lim Kam Ming

KEY IMPLICATIONS

• Use of comics is a viable approach for mathematics instruction in the classroom.
• Comics provides teachers an opportunity to infuse 21st century competency skills in mathematics lessons and to allow greater engagement of all students.
• Students can benefit from the use of comics as an approach for mathematics instruction.

BACKGROUND

The research project started off as an attempt to explore whether comics is a viable approach for mathematics instruction for low attaining students. This began after some Normal Technical (NT) teachers claimed that they had attempted to use comics to motivate their students. The project started as an effort to utilize existing education literature to design comics alternative teaching package.

FOCUS OF STUDY

In the study, we designed the comics instruction package and allowed teachers to enact the lessons in their classrooms. Following that, we observed how the teachers tweaked the package to meet the needs of their students, and how their students responded to the comics lessons. It started off as a design experiment with cycles of iterations to finetune the package.

KEY FINDINGS

Use of comics is a viable approach of mathematics instruction, especially to the low attaining students at the secondary level. We also observed how teachers managed to tweak the package subject to local constraints and their students’ learning needs. As an additional outcome, we found that comics has an important place in primary mathematics education programme as well.
SIGNIFICANCE OF FINDINGS

Implications for practice

The project presents the pedagogical practices associated with the use of comics for classroom instruction.

Implications for policy and research

The project introduces the design principles of comics teaching package.

Learning gains (for studies involving intervention)

The approach can have implications for the design of instructional materials (e.g. textbooks) especially for low attaining students.

Proposed follow-up activities

More studies should be conducted on the design principles of using comics.

PARTICIPANTS

This project involves seven secondary schools focusing on lower secondary NT students and one primary school focusing on the upper primary Standard level.

About the authors

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