
DEVELOPMENT AND EVALUATION OF THE "QUESTION-SOLUTION-REFLECTION" FRAMEWORK

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ABSTRACT

It is agreed upon in the literature that reflection is a vital part of learning, yet it is seldom focused on in the physics education context. This presentation will summarise three studies into reflective thinking in the physics education multimedia context, and the development of the "question-solution-reflection" framework.

According to Dewey (1933) and Rogers (2002), reflection can be thought of containing phases -

- An experience, and the spontaneous interpretation of that experience
- The articulation of the problem or question that arises out of the experience
- The generation of possible explanations for the question
- The explanations need to be examined and tested

The videos used, and developed for the present studies, followed these phases. In the first video, an experience was shown, and a question was asked. The students wrote down their answers to the question, and then watched the second video, which contained the solutions. The students were prompted to write down if they changed their answers, and the reasons for doing or not doing so.

Over 3000 responses to this format have been received as part of the three studies, and we argue that the results show that this framework is effective at promoting reflective thinking.

REFERENCES

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