

The Shanzu Case – an open online problem based learning platform

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ABSTRACT

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BACKGROUND

In a problem based learning environment engineering students are expected to work with authentic real life problems embedded in a given context. The ideal approach would be to bring students out of the university and into the given context to gather data. This approach may be too costly, especially if the context is far away from the university. The second best option is to bring the problem in the form of a case scenario, including a realistic presentation of the given context, into the university or - as in this example – bring it onto an open online learning platform that can be accessed by students anywhere in the world.

EXPLANATION

The present case scenario (Andersen and Schiano, 2014) takes its point of departure in a water and electricity project in the Shanzu Transitional Workshop for Disabled Women. The workshop is located in Shanzu in Kenya and the project was funded by the Poul Due Jensen Foundation. The project developed over several phases and the learning material is structured in four modules according to these phases. Students cannot enter a new phase before they have completed assignments from the previous phase. This modularised approach forces students to move through the project phases, having to make decisions on the same issues that the project engineer faced during the project. Thus, as students work through the material they have an opportunity to develop from what Dreyfus and Dreyfus (1980) call the novice stage to a stage of competence, with the project engineer by their side.

SET-UP

The learning material consists of two knowledge platforms: An academic knowledge platform, including learning objectives, online theoretical lectures and student assignments and a contextual knowledge platform containing videos, interviews, problem presentations, presentation of dilemmas, instructions and chosen solutions by the project engineer etc. Through this mix of educational material the students engage with the three aspects of learning: Knowing, acting and being, the latter involving personal reflections and normative decisions (Barnet and Coate, 2005).

EXPECTED OUTCOMES

For students using the online learning material the expected outcomes are:

- Provide opportunities to work with a problem based learning case
- To gain a sense of real life engineering in an unfamiliar cultural context.

For participants in the hands-on session the expected outcomes are:

- Knowledge about the learning material as a potential resource for your own teaching
- Inspiration to create problem based online learning material.

REFERENCES

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