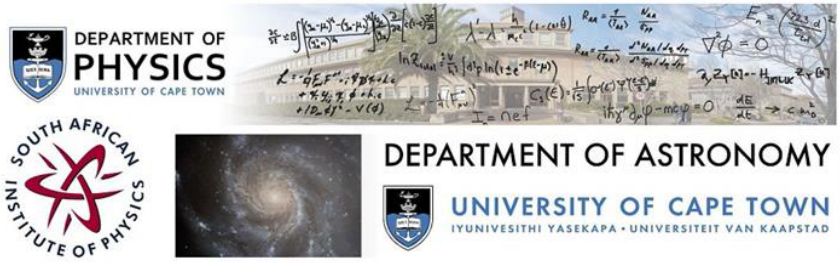

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Using Design Based Research to improve teaching, testing and learning.

Wednesday, 6 July 2016 10:00 (20 minutes)

Abstract content
   (Max 300 words)
Formatting &
Special chars

Design Based Research (DBR) claims to provide solutions to real educational challenges by refining both the interventions offered by teachers (or lecturers) and the instruments used to test their effectiveness. From the literature: Wang and Hannafin (2005) proposed five basic characteristics of design-based research: "Pragmatic, Grounded, Interactive, iterative and flexible, Integrative, and Contextual".The author made use of this methodology in the refinement of a science show presented at Unizulu Science Centre. The show uses music and musical instruments to introduce students to topics around sound and waves. An extensive study of this show (conducted towards a Masters degree) measured what students learnt from the show. The study looked separately at students coming from rural, urban and township schools.As an extension to this study (conducted towards a doctoral degree) the author used the data from the above study to refine the show and to attempt to boost learning achieved by the students – especially in the weaker rural group. The survey instruments used were simultaneously refined to try to avoid ambiguity and misunderstanding of the questions. Students were presented with the "new improved" show and then tested using the refined instruments. Learning was contrasted with that previously achieved.While performed in the context of science shows in science centres, this study nevertheless has relevance to all educational interventions. It offers a feedback instrument (using DBR) to assist educators in refining their teaching (and the instruments used to evaluate it) to suit the classes they present to. Data and conclusions from the two studies will be presented, and some aspects of the show performed.

Apply to be
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Level for award
 (Hons, MSc,
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PhD

Main supervisor (name and email)
and his / her institution

Prof. Trevor Anderson, Purdue University, USA and UKZN

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