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Expository vs Problem-based approach to Physics practicals at the University of Johannesburg-A case study

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In this article we compare the dichotomy of two styles of conducting a Physics practical; one a problem-based (non-traditional) approach and the other an expository (traditional) style is. The cohorts of learners chosen for this comparative study are 64 students in the Health Sciences program at the University of Johannesburg. Students were first required to determine the wavelength of the spectral lines of mercury using a standard spectrometer employing the expository method and thereafter following a problem-based approach. At the end of the two experimental methods, the students were provided with a questionnaire to elucidate perceptions about both approaches in terms of assessments, time spent in laboratories and preparation time. The analysis of the responses in the questionnaire showed a slightly more positive preference to the problem-based approach in terms of conceptual development within the laboratory while in the expository approach the learning outcomes were achieved outside the laboratory. Albeit both methods have a role to play in different learning environments, however, instructions need to be re-activated to keep up with educational reforms and advances in technology.

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