INFORMAL LEARNING AT SCIENCE CENTRES

by

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ABSTRACT

Science centres are a new and an innovative way of teaching science informally. Science centres in foreign countries are commonly known as Science museums. Presently we have six science centres in operation in South Africa. Science centres are built along similar guidelines of their foreign partners. The concept of science centres have been in South Africa for the last five years.

Visitation to the Science centre with the use of stimuli will enable visitors to build on their existing knowledge and construct new knowledge. Visitation is free and open to all in the public. The science centre is to capture the attention of their visitors with their exhibits. The exhibits are “hands on” and employ different designs and colours to capture the attention of the learners.

Learning in the science centre adopts a very informal method of teaching as compared to the formal education system. Learners and visitors are to interact with another and share their experiences. Learning occurs by personal, social interaction and the physical settings.

The personal context looks at learning that occurs through motivation and expectations, prior knowledge, interest, beliefs and their choice of exhibits. The personal also engages the learner to stimulate their understanding and most important the learner is to take responsibility for their own learning. Social interaction occurs when visitors engage in interaction with another and learn from one another. The physical refers to the environment and the exhibit design to stimulate the mind of the visitor.

Science centres are to exhibit ideas and concepts rather than objects. Exhibits are for the visitors to explore and handle them and to enjoy the experience of the centre. To ensure the visit is productive and beneficial to the learners, the educator needs to have pre-visit lessons. This would allow for the learners to familiarise themselves to the settings and to know what is expected of them on their visit. Post-visit activities will reiterate the purpose of the visit.

The Wilcoxon T-test was administered to confirm that visits to the science centres are beneficial to the learners. This was validated by a Pre, Post Test activities and interviews. Analysis of the data confirms that a previsit, post visit and the interview have shown positive feedback.

Informal learning has a great future to play in the learning of science at schools. South Africa needs to reach out to the country and open the minds of the public to show them the benefits of the centre and how it would help the public and their choice of their careers.

To improve the visit to the science centre the following recommendations and guidelines are recommended for the educator and the learner:

a) Pre-visit activities
b) Activities during the visit
c) Post-visit activities

These recommendations are needed to be worked hand in hand with the science centre to develop better learning skills for their learners and to ensure their visit is fruitful, meaningful and enjoyable.

DEDICATIONS AND ACKNOWLEDGEMENTS

This research has given me the opportunity to experience and visit many of the science centres in South Africa and in the United States of America. It has allowed me to compare and evaluate the advancement and the direction that South Africa needs to take in the future to be on par with the rest of the world.

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DECLARATION

I, POOVANTHRAN SATHASIVAN CHETTY, DECLARE THAT THE RESEARCH IN MY THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE M.ED. DEGREE IN DIDACTICS NATURAL SCIENCE, ENTITLED

“INFORMAL LEARNING AT SCIENCE CENTRES”

REPRESENTS MY OWN AND ORIGINAL WORK AND HAS NOT BEEN SUBMITTED PREVIOUSLY FOR ANY DEGREE AT ANY OTHER UNIVERSITY.

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