



EFFECTIVENESS OF DIGITAL FABRICATION TOOL ON CONCEPTUAL AND AFFECTIVE LEARNING AMONG UNDER GRADUATE NURSING STUDENTS- A PRE EXPERIMENTAL STUDY

Ms. Sani S George

Tutor, P D Hinduja Hospital & MRC, College of Nursing.

Ms. Chaithanya Valsalan

Clinical Instructor, P D Hinduja Hospital & MRC , College of Nursing.

ABSTRACT

Background: Current Technological transformation in the education reveals the necessity of exploring various innovative teaching methods in nursing education. These technological transformations have the ability to deepen, enrich, and adaptively guide learning and interaction, but it hold potential risks for neglecting student's affective learning processes that is, learners' emotional experiences and expressions in learning. **Objectives:**To evaluate the effectiveness of Digital Fabrication Model on Conceptual and Affective learning among Under Graduate Nursing Students, To elicit Opinion on Digital Fabrication Model. **Design:** A pre-experimental pre-testpost-testdesign. **Setting:** Selected nursing colleges in a metropolitan city, **Participants:**30 undergraduate nursing students. **Methods:**Pre-test is taken. Participants are requested to create online games to learn the topic. Post-test is taken along with Opinoinnaire to assess the effectiveness of digital fabrication tool. **Results:**Study results shows that the digital fabrication tool was effective in improving the affective and conceptual learning among the participants.**Conclusions:** The digital fabrication tool can help educators to reduce the potential risks for neglecting student's affective learning processes that is, learners' emotional experiences and expressions in learning.

KEYWORDS : Digital Fabrication, Conceptual and Affective Learning, Nursing students

INTRODUCTION:

Education in the 21st century is digitalized, globalized and in constant change. The technological incorporation in education has the ability to develop the cognitive domain with a potential threshold of neglecting the affective domain aspects. As pedagogical approach scaffolding the cognitive and affective domains in education is necessary in order to make digital learning meaningful and engaging.

Problem Statement:

Effectiveness of Digital Fabrication Model on Conceptual and Affective learning among Under Graduate Nursing Students- A Pre Experimental Study

OBJECTIVES:

- To evaluate the effectiveness of Digital Fabrication Tool on Conceptual and Affective learning among Under Graduate Nursing Students
- To elicit Opinion on Digital Fabrication Tool

MATERIALS AND METHODS

Research Approach: Quantitative research approach

Research Design: Pre-experimental pretest posttest design

Setting: Selected Nursing College of Metropolitan city

Sample: 30 Undergraduate Nursing Students

Sampling Technique: Non-Probability, Purposive Sampling

Tool: Structured Questionnaire

Data Collection

Step 1: Selection of Topic: Revised Bloom's Taxonomy of Educational Domains

Step 2: Pretest on Revised Bloom's Taxonomy of Educational Domains (Google Forms)

Step 3: Ideation on the topic and creation of the learning material

Step 4: Argumentation on the developed learning material

Step 5: Digital Fabrication of the learning material

Step 6: Reflection on the developed learning material

Step 7: Post Test on Revised Bloom's Taxonomy of Educational Domains (Google Forms)

RESULTS:

Data analyzed using inferential statistics. Paired't' test is used to compare the pretest post test score within the group. The calculated t value 5.8437 found greater than the table value 3.659 (p value <0.001), thus the null hypothesis is rejected and alternate hypothesis is accepted.

Table-1:- : Comparison of the pretest and post test score showing the effectiveness of Digital Fabrication Tool on conceptual learning

Pretest		Posttest		't' test calculated value	Inference
Mean	SD	Mean	SD		
8.73	2.90	12	2.61	5.8437	S

Fig.1: Comparison of mean scores of Pre test and Post Test

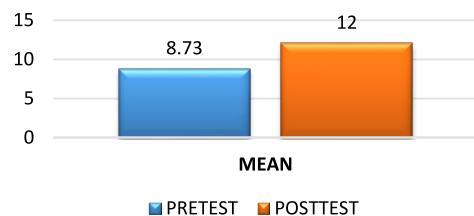
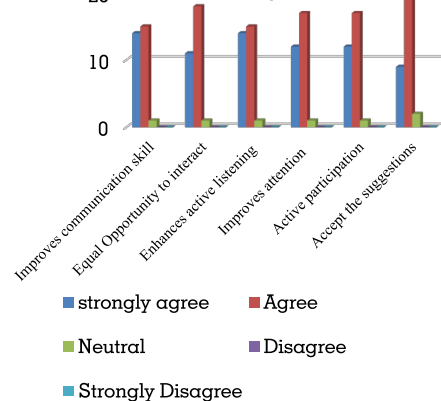


Fig 2. Effectiveness of Digital Fabrication Model on Affective learning



Opinionnaire is given to the subjects to assess the effectiveness of the digital fabrication on affective learning. Participant's response reveals that the tool was effective in improving the affective learning.

DISCUSSION:

A study conducted by faculty of education in the University of Oulu, Finland on Affective Learning In Digital Education: Case Studies of Social Networking System, Games for Learning, Maker's Culture and Digital Fabrication. This study results showed that the use of various digital tools were effective in the learning process especially in influencing the affective domain. In this present study it proves that using various digital tools for education is meaningful when the aim is to provide opportunities for interactions and sharing ideas and thus increase students' opportunities to turn an active mind to multiple contexts.

CONCLUSION:

A pre experimental study conducted to assess the effectiveness of Digital Fabrication Tool on Conceptual and Affective learning among undergraduate nursing students. Structured questionnaire and Opinionnaire prepared and used to collect data. Study results shows that the digital fabrication tool was effective in improving the affective and conceptual learning among the participants.

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