REPORT ON

ERASMUS+ *InMotion* RESEARCH PROJECT

NEWSLETTER – AUGUST 2019

Date: August 2019
Venue: via official website of Marine Technology Center, UTM
Task: 6.2 Promotion of project results via newsletter

The InMotion UTM team disseminated the InMotion project results of UTM team in 2019 (in term of publication) via newsletter in the website of Marine Technology Center, UTM via newsletter.

Parimalah Loganathan, Adibah Mohd Alwi, Najibulla Romainor, Corrienna Abdul Talib, Chuzairy Hanri, Adi Maimun Abdul Malik, Kang Hooi Siang, 2019, Students' Chemistry Learning Process Through VisualProgramming Language: A Preliminary Study, International Journal of Recent Technology and Engineering (IJRTE), 8 (1C2), 509-514

Decline in students' interest towards science related subjects like chemistry and decreasing number of expertise in science related careers is a major issue that needs serious attention. Introducing computer programming into teaching and learning process is believed to be able to cultivate interest and make learning process more meaningful. In recent years, there are numerous researches conducted regarding teaching and learning of visual programming. However, there are very few studies that highlight the integration of programming into pedagogical content. This study is conducted to survey the perception of learning process by students of different gender when they use visual programming language to create a content-based presentation. This research employed a quantitative research design using descriptive analysis. The respondents were 24 form four students from seven secondary schools in Johor who took part in "Scratchtopia Challenge", a competition held to introduce visual programming to students. A set of questionnaires consisting 13 items comprising three constructs of learning process; active learning, perceived usefulness and enjoyment were answered by the respondents during their briefing session of the competition. The instrument has acceptable reliability value of 0.97. Their feedback was analyzed quantitatively using Social Packages for Social Sciences (SPSS). The findings of the study indicated that visual programming did influence the students' perception on chemistry learning process even before participating in the competition. The researchers recommended other interested researchers or organization to use these findings as evidence or support for further investigation on the subject.

Corrienna Abdul Talib, Hassan Aliyu, Adi Maimun Abdul Malik, Kang Hooi Siang, Igor Novopashenny, Marlina Ali, 2019, Sakai: A Mobile Learning Platform, International Journal of Interactive Mobile Technologies, 13(11), 95-110

These days, humans have been witnessing related technological and social development, by means of which mobile technologies and Internet yield global access to information with mobility of knowledge. Mobile learning platforms are designed based on electronic learning (e-learning) and mobility. It is regarded as a useful way to enhance the learning process. Sakai as a mobile learning platform, design intentions are to be adaptable to any educational purposes, within or outside the institution, dependent on the provision of effectiveness in classroom instruction based on the learning style of the students, extensible on the cultivation of thinking skills in the learner, and efficient in communicating and exchanging data among its enrolled classroom members and other online platforms. This study employed a systematic review of related literature to investigate the predominant research methodology adopted by various scholars to assess necessary factors concerning mobile learning platform. Fifteen articles are selected based on established criteria. The findings indicated that most of the researchers used quantitative research methodology in investigating the effectiveness and concern variable of mobile learning. Also find out is that most of the outcome of the studies include, achievement, perception, pedagogy, motivation and mobile learning platform as a form of educational technology.

Corrienna Abdul Talib, Faruku Aliyu, Adi Maimun bin Abdul Malik, Kang Hooi Siang, 2019, Enhancing Students' Reasoning Skills in Engineering and Technology through Game-based learning, International Journal of Emerging Technologies in Learning, 14(24), 69-80

Engineering and technology are crucial domains both in colleges and in the industries as they play a vital role in the nations' economy and serve as the medium for the nations' active participation in the global competitiveness aiming at attaining industrial revolution 4.0 goals. These goals are only realized when graduates, particularly engineers and technologist are equipped with reasoning skills. In view of this, the paper highlighted the connections between reasoning skills in technology and engineering through game-based learning. The paper utilized systematic review format and synthesized the existing literature through search strategy, inclusion and exclusion criteria, framework analysis and quality assessment. It further analyzed and discussed types of games in learning with relevant descriptions and how its integration into teaching and learning technology and engineering courses would enhance reasoning skills among students and promote their problem-solving ability and likewise creativity to innovate new products, machines and services for societal development. The paper suggested for the integrating of suitable games in learning technology and engineering courses.

Innovative teaching and learning strategies in open modelling and simulation environment for student-centered engineering education
573751-EPP-1-2016-1-DE-EPPKA2-CBHE-JP (2016-2565 /001-001)

Page **2** of **2**