Chapter 2

Mobile CGPA Monitoring System: A Tool to Guide Self-Directed Learning

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ABSTRACT

The digital age also referred to as information age is characterized with the ability to transfer information freely and quickly. This makes self-directed learning strategies to gain ground. Self-directed learning facilitate students or learners to take ownership of their learning. Individual academic performance monitoring is an essential part of self-directed learning. In order to achieve this, certain performance measuring technique is required to guide learners in monitoring their performance such as

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Mobile CGPA Monitoring System

Cumulative Grade point average (CGPA). Students’ Academic performance of is characterized by the overall performance in both test, course work and examinations each year which culminates in a grade point average. This has help in determining the academic standing of students. Therefore, this chapter proposed a mobile CGPA calculator to help students monitor and measure their performance during the learning process. The system is proven to be effective against the required functionalities.

INTRODUCTION

The increasing speed growth of knowledge and information as well as the continuous invention and widening access of communication technology, society is changing in a much rapid rate than before (Zhoc and Chen, 2016). Continuous advances in technological development contributes significantly to a unique, continuously evolving culture which requires skills and abilities unique to the 21st century – including those of self-directed learning (SDL) (Teo et al., 2010). According to Knowles (1975), self-directed learning is “a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies and evaluating learning outcomes”. This conception of self-directed learning as a process focuses on the skills and abilities needed by an individual to engage in the learning process, e.g., skills in setting goals for learning, identifying learning resources and evaluating the learning outcomes (Zhoc and Chen, 2016).

Setting learning goals and attaining certain performance is one of the essential components of self-directed learning. In order to achieve this, certain performance measuring technique is required to guide learners in monitoring their performance such as Cumulative Grade point average (CGPA). Grade Points plays an important role in a university’s grading system, this is because the measure of performance of a student in any course is given by the grade-points obtained in that course. This system allows student to make projections in terms of performance and work towards achieving such.

Therefore, in this chapter, an android-based mobile app was developed that allow student maintain a list of registered courses, compute GPA and CGPA, predict a target CGPA based on current CGPA. These functionalities are provided to guide student measure their performance during the learning process as a self-directed learning strategy in digital age.
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