Multimedia Package For Learning English Based On Learners' Profile

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ABSTRACT

The current advancement of Information and Communications Technologies (ICT), especially the advancement in multimedia technology, has spurred the use of computers in education setting. The use of multimedia technology for teaching and learning have been proved that to be essential and more effective compared to the conventional approach. Research have stated that multimedia technology application can help the students in their learning process by attracting and engaging the learners, providing a better learning retention time, making learners more self reliant and proactive in their learning environment. This research aims to study the development of a multimedia package based on learners` profile in English. The multimedia package was developed based on two main objectives : I) developing a learners` profile to determine learners` learning style, II) developing a multimedia package for learning English. The development of this multimedia package took into consideration various aspects such as : principles of instructional design in the development of learning materials and the development methodology of a package; multimedia elements and the integration of learning and cognitive theories in package development. The multimedia package consists of three main modules to meet the needs of each type of the preferred modality learning style of learners : visual, auditory and kinesthetic learning style. The evaluation of the multimedia package was conducted to test the system based on its strengths and weaknesses amongst the students. Findings of the research showed that despite a number of weaknessess of the system, the modules of the system based on specific learner's learning styles managed to attract the interest of learners based on their matching learning styles. The fuzzy logic and neural network have been applied at this stage to analyse the ouput data for evaluation purposes.

1.0 INTRODUCTION

This research aims to highlight the importance of learning styles based on learners' profile in the process of learning specifically in language learning. The approach of language learning is difference compared to others subject such as Mathematics and Sciences by instance, in learning the Mathematics, the approach is more to the semantic logic but differently in language learning. In language learning, its more to the application of the language in daily context based on holistic and associated methods. In the development of this package, diversity of learning and cognitive theories are involved to fulfilled the learning requirements of students. According to (Kolb ; 2007), there are differences in learning styles amongst learners and important for the teachers to identify the learning styles of their students; 'one size doesn`t fixs all'. Moreover, by engaging the learners with the right channel of their learning style may help them in their learning process for longer retention and attention in the learning environment. Despite of this, the teachers have to diagnosis the learning style and determine the learners' profile by analysing the strengths and weakness of the learners. There are three (3) types of learning styles modalities which are; kinesthetic,

auditory and visual. Due to the mismatch of the learning styles will affect the learners` performance. The learners will denote to be a passive learners instead of active learners in their learning process and development.

2.0 PROBLEM STATEMENTS

The problem statements of this research are :

1. There is a gap between the levels of the cognitive amongst students and due to this, difficulty to make sure the teaching and learning methods are best for all the students in a class room.

2. There is irrelevant apparatus that will fulfilled all the types of learning styles at one time.

3. Difficulty in applying diversity of methods and approaches in the same class with different learning styles amongst the students.
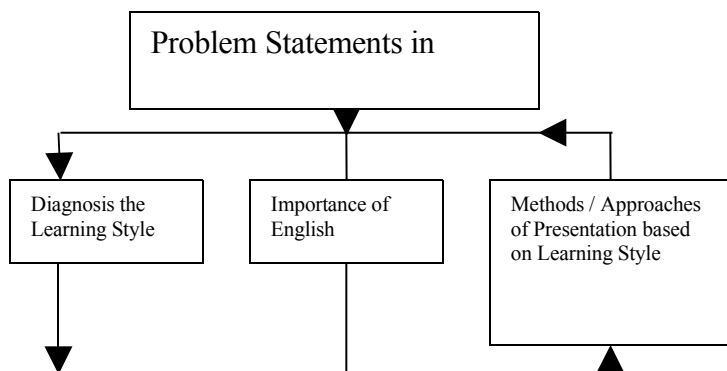

Figure 1. The Model of Problem Statements

3.0 RESEARCH CONCEPTUAL FRAMEWORK

Research Conceptual Framework consists of three (3) phases including the process of preliminary analysis, design & development and implementation & evaluation. The first phase is the process to determines the problem statements of the current issues regarding the English syllabus that been taught in school. There are also a series of interviews been conducted with the English teachers in order to determines what are the topics

and skills that are tough for the students in their process of learning.

The second phase basically involved with clarifying the analysis needs, designing the Development Model and ID Model based on the preliminary analysis report that have been done during the first phase.

The third phase is the evaluation stage where a few of questionnaire sets and checklists have been distributed amongst the sample and non-sample group. The data also been analyzed and evaluated using the Fuzzy Logic and Neural Network approach to gain the approximate data.
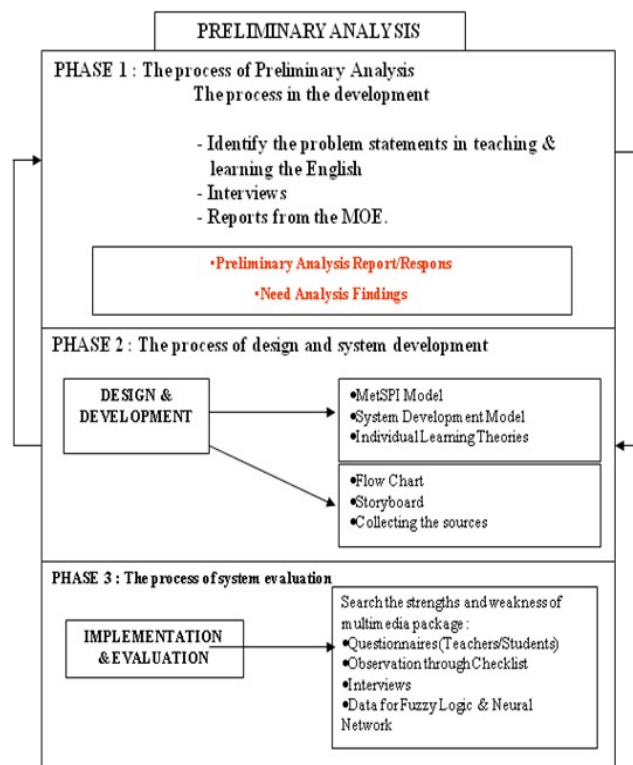

Figure 2. The Research Conceptual Framework

4.0 RESEARCH OBJECTIVES

1. Designed one methodology of multimedia package development based on the integrated ISD model and SDLC Model, called as "Individual Learners' Profile Life Cycle".

2. Identified the characteristics of learning styles based on modality preferences such as visual, auditory and kinesthetic learners.

3. Prepared a multimedia package based on learners' profile.

4. Prepared a module of System Diagnostic that is able to identify the learners' profile for the purposes of reinforcement in multimedia package.

5. Built a research instrumen to test the advantages and disadvantages in multimedia package using Fuzzy Logic and Neural Network approaches.

5.0 RESEARCH CONTRIBUTIONS

There are nine (9) research contributions of this project which are :

1. This project has produced one "Individual Learners' Profile Life Cycle".
2. The development of multimedia package based on Learners' Profile.

3. Based on research's findings, there are three (3) types of Learning Styles/ preferred modality included visual, auditory and kinesthetic.

4. The development and design Model ID through surrounding navigation.

5. The development of multimedia package prototype.

6. The development of Diagnostic System and Learners' Profile.

7. The evaluation using Fuzzy Logic and Neural Network approach.

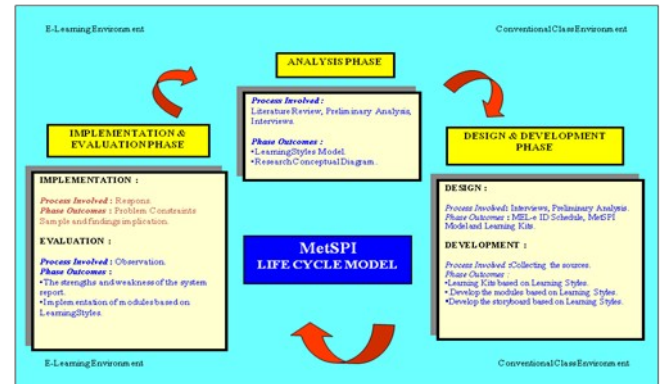8. The design and development of the Questionnaires for multimedia package evaluation.

9. The design and development of the Checklist Instrument for multimedia package evaluation.

Figure 3. Individual Learners' Profile Life Cycle.

6.0 CONCLUSION

The determination of the suitable approaches in the teaching and learning process is important besides to put the account of others factors such as learning style modalities and learning environment. According (Bedford; 2006), the main factor that should be adapted in the application of the learning style of the students is to identify clearly the preferred modality of learners' profile of the students. Due to that, an appropriate multimedia package can be developed to facilitating the positive self esteem amongst the students and more than that is to develop a lifelong enthusiasm in the learning process of the students.

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