Chapter 4
Using ‘TRIRACE©’ in the Classroom:
Perception on Modes and Effectiveness

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ABSTRACT

Teachers are a critical factor in the educational system; they are vital to the success or otherwise of any innovation (such as computer games) in the school system. Their perceptions are critical to the success or failure of integrating computer games (Can & Cagiltay 2006). If teachers’ attitudes are negative and they do not have a say in how to use the innovation, then no matter how well a game has been packaged, it would not be effective (Aremu, 2004). One way to ensure positive teachers’ attitudes is to involve them, right from the teacher training period, in design, validation and implementation. This is the rationale behind the study which would be presented in this chapter. The goals of this chapter are therefore to firstly, provide support for the effectiveness of the use of computer games in the classroom and secondly, present teacher perceptions on how to use a computer game in the classroom.

INTRODUCTION

‘TRIRACE©’ is a board game on triangles. It was designed to meet the objectives of one of the topics in the Nigerian primary Mathematics curriculum focused on types and properties of triangles. The nature of the topic is such that pupils have to learn the various characteristics of triangles and be able to differentiate them when seen or described. This at most times have been found to need a lot of drill

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and practice, thus the reason for the board game. ‘TRIRACE© is a typical board game with ‘start’ and ‘finish’ positions. The successful use of the board game with Nigerian primary pupils (n=6) and the attendant effectiveness of the game based strategy on achievement of pupils showed that games could actually make learning easier, more interesting and motivating (Aremu 1998). Based on this success and the increasing access of the Nigerian primary school pupils to computers, which has resulted in great levels of interest in computer use, the board game was transformed into a computer game with
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slight changes made to the game to accommodate the computer format. Using such a game successfully in the classroom is contingent upon teacher’s acceptance of the game. Teacher’s acceptance is based on their attitudes and predispositions. The latter can however be modified if the teachers are involved in the process of design, validation and/or process of implementation. In a country like Nigeria where the market for locally made computer packages for learning and particularly, computer games is still very scanty, it becomes imperative for game and other software designers to ensure teacher acceptability.

Thus in this chapter we shall be looking at what pre-service teachers are saying about computer games. This is done by exposing the teacher to the use and application of TRIRACE©. This way their perceptions are now based on their use of this game. This is very important because not many teachers have yet had the opportunity to interact with computer games. The format of the game is very simple and easy to interact with. This is so since this would make it easier for first time users of educational games to manipulate and easily understand. For this country this is such a pioneering work which would assist curriculum planners, teachers and other stakeholders to make decisions concerning the use of games in the classroom.

The purpose of the study which is the basis of this chapter was to show what pre-service teachers’ perceptions are about integrating such computer games into the classroom.

In the study

• The teachers evaluated the ‘TRIRACE©’ for effectiveness, content accuracy, suitability, etc.
• The teachers were also exposed to two (2) video recordings of life lectures in which students were using the computer game in the classroom. The teachers perceptions on the possibilities and problems associated with each format were expressed.

• Recommendations were made based on the perception of teachers about what would be the best formats for integrating computer games in Nigerian classrooms.

In this chapter therefore, attempts would be made to give convincing proof about the effectiveness of the use of games in the classroom and also to provide teacher perceptions of using computer games in the classroom based on a study carried out with teachers. From the latter, suggestions on classroom integration of computer games based on what teachers are saying would be provided.

BACKGROUND

A lot of reasons have been highlighted for the inclusion of computers generally into teaching and learning systems. One of the reasons is the increase in knowledge as well as complexity of such knowledge. Today’s pupils are inundated with a lot of information which they may not be able to cope with except they resort to the use of computers. (Birgin et al, 2009; Alkan, 1995). Furthermore in many developed countries lack of adequate number of teachers has made computers more popular for teaching.

However this popularity has been enhanced by the fact that researches have shown the effectiveness of computer assisted learning in learning various subjects and at virtually all levels of education—whether formal or informal. (Tutak & Birgin, 2008; Liao, 2007; Basturk, 2005; Vale & Leder, 2004).

Studies, though few in Nigeria has also supported the efficacy of using various modes of computer assisted learning in teaching and learning processes. (Udousoro, 2000; Egunjobi, 2002; Ibode, 2004; Aremu & Adefelu, 2005; Aleburu, 2008). It is therefore imperative that computers be seen as a necessary tool for learning in this fast paced age.
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