


Chapter 8

Adaptive Learning Systems for Personalized Language Instruction in Transnational Higher Education

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ABSTRACT

This chapter examines the evolving function of adaptive learning systems delivering personally tailored language instruction within the transnational higher education infrastructure. These AI-based systems will provide personalized learning experiences that match the needs and learning paces of an individual student, thereby marking a significant change in the very outcomes of the learning of the language. The use of such platforms reveals that fluency in a language increases by 40%, the time to achieve this standard reduces by 30%, and it is an aid to Transnational Higher Education (TNE).

INTRODUCTION

Language learning and technology integration are considered a couple of the biggest game changers in the world of education. In particular, TNE environments present challenges but at the same time opportunities for language educators within a context with diversified student cohorts at differentiated levels of linguistic competencies. Responding to these challenges, adaptive learning with AI empowerment provides an enriched experience tailored to the needs and pace at which each learner learns. The following section will address the state of the art in adaptive learning technologies, their application to language teaching, and their effects on student learning outcomes in TNE settings.

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Background and Rationale

Proficiency in the target language has become a significant factor in predicting the success of higher education programs, particularly those offered through TNE. This is because, by and large, they have to grapple with the challenges of studying through a medium that is usually not their first language. Quite often, traditional modes of teaching languages have not typically served the diversities of TNE learners and delivered suboptimal learning results due to their generic nature (Edmundson, 2011). For its part, an adaptive learning system relies on AI to personalize content and testing to the profile of the individual for much better results in the learning experience. For example, adaptive learning: in effect, allows a learning system to change content and tests tailored to the individual's profile in maximizing learning in maximizing learning without compromising the validity and reliability of the course learning outcomes and assessment.

Adaptive Learning Systems

Adaptive learning systems utilize algorithms to look into data on the performance and behaviour of students in learning and adapt to the relevant instructional content and pacing if required (Pane, Griffin, McCaffrey, & Karam, 2014). The system provides real-time feedback on learning by flagging teachers where the students find hard content to grasp and provides more resources or opportunities for practice on what tasks they are completing and where they are lacking behind (Kerr, 2016). This adaptation is very essential in TNE settings where the students have diverse linguistic and educational backgrounds.

The Role of AI in Personalized Learning

AI technologies lie at the very heart of the way adaptive learning systems function. By processing large amounts of data, AI can predict student performances and suggest personal learning paths, or it can even adjust to changes in a student's learning behaviour while in progress (Zawacki-Richter et al., 2019). This dynamical change feature is fundamental to keeping students engaged and ensuring that each learner receives what he or she needs to be successful (O'Keefe et al., 2014).

Current Applications in Language Instruction

Other studies attest to the efficacy of adaptive learning systems in language teaching. In one particular study by Johnson and Samora (2016), students using an adaptive learning platform in the process of studying English as a Second Language significantly outperformed their peers, who were instructed by traditional means. Another study by Pappas (2016) revealed higher engagement and student satisfaction with such systems applied to language courses.

Challenges in Language Instruction for TNE Students

Difficulty in language instruction can be attributed to inconsistencies in the prior knowledge of languages, different learning speeds, and cultural diversities among TNE students (Knight, 2015). These could all be potential hindrances to achieving language proficiency and participating fully in their academic programs as students need higher level of language proficiency in their programs to comprehend

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