

Improving the Learning of Language Proficiency at Tertiary Education Level Through AI-Driven Assessment Models and Automated Feedback Systems

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Abstract

The impacts of artificial intelligence models in enhancing foreign language proficiency cannot be overemphasized. AI-driven assessment models and automated feedback systems are technological innovations that have enhanced the learning of different components of the foreign language. In this study, the focus was to revisit how AI-driven assessment models and automated feedback systems have helped foreign language learners achieve a high degree of proficiency in the foreign language. The study recruited a total of 529 undergraduates from Jordanian universities, who are studying different foreign languages to participate in the questionnaire survey that was designed using Google Forms. As a quantitative study, analysis was conducted using relevant statistical measures. Results from the analysis demonstrate nuanced views on automated feedback systems held by students. About 53.65% of participants recognized the benefit of automated feedback in giving timely and particular insights into their language ability, allowing them to effectively comprehend their strengths and areas for progress. However, 37.57% of students had reservations about the immediate form of feedback, which did not always give them the confidence to take part in language-learning activities without fear of making mistakes. The results also indicated that a combined 90.12% of participants accepted that receiving individualized feedback helped them set meaningful goals for their language learning and motivated them to achieve those goals. In addition, a whopping 86.58% of students used automated feedback systems to spot patterns of inaccurate language usage, demonstrating initiative in their pursuit of better grades. When participants had their accomplishments emphasized and their development over time highlighted, a combined 71.97% of them showed signs of motivation. All of these results together show how intricate the balance is between the advantages and disadvantages of automated feedback systems and AI-driven assessment models. Overall, the research found a mean score of 4.59 for motivation and academic success, suggesting

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that a personalized, dynamic, dialogue-driven feedback system that is sensitive to individual requirements might greatly improve the foreign language learning experiences of students.

Keywords: *AI models, language learning, proficiency, feedback systems.*

1. Introduction

Within the domain of advanced academia, the assimilation of artificial intelligence (AI) has materialised as a paradigm-shifting breakthrough, fundamentally reshaping the terrain of pedagogy and knowledge acquisition. The utilisation of AI technology presents a highly auspicious prospect in the realm of language education, as it possesses the potential to fundamentally transform and elevate the aptitude levels of students enrolled in higher education institutions (George & Wooden, 2023). This research paper delves into the intricate convergence of assessment models driven by artificial intelligence and automated feedback systems, to enhance the pedagogy of language proficiency at the tertiary education level. Through the use of AI, teachers can delve into novel methodologies for language teaching, thereby guaranteeing a more individualised and efficacious learning encounter for students (Celik, 2023). The amalgamation of AI-powered evaluation models and automated feedback systems embodies a paradigm-shifting advancement, holding the potential to reconcile the dichotomy between conventional pedagogical approaches and the imperatives of the contemporary digital era (Chan, 2023).

In teaching language proficiency, teachers encounter a plethora of intricate challenges. Tertiary institutions of learning bear the responsibility of endowing students with linguistic proficiencies that are not only all-encompassing but also amenable to the intricacies of our interconnected world (Huang & Renandya, 2020). Nevertheless, the dependence on traditional evaluation and feedback techniques frequently impedes the efficiency of language pedagogy. The inherent constraints of conventional methodologies become readily apparent when faced with a multitude of cognitive preferences and disparate rates of individual advancement (Nicol & Macfarlane-Dick, 2006). Consequently, it is imperative to delve into alternative methodologies that can furnish instantaneous discernment regarding the levels of linguistic proficiency exhibited by students, while concurrently proffering customised feedback to effectively tackle their individualised educational requirements (Nicol, 2009). Traditional approaches to assessment and feedback have demonstrated their insufficiency in effectively tackling the distinctive obstacles presented by language education within the digital era. This research paper acknowledges the inherent constraints associated with exclusively relying on traditional approaches, thereby emphasising the imperative for a transformative shift in the realm of linguistic teaching (Luckin & Holmes, 2016). Through the diligent exploration of AI-powered evaluation frameworks, such as intelligent tutoring systems and automated, inconspicuous action-by-action assessments, teachers have the opportunity to acquire invaluable discernment into students' self-regulation amidst the process of acquiring knowledge (Alevin et al., 2010). Moreover, the utilisation of automated feedback systems has exhibited considerable potential in delivering prompt and individualised guidance to students, thereby building a more interactive and captivating educational context (Wang, Shang, & Briody, 2013). The utilisation of these models not only serves to optimise the efficacy of assessment procedures, but also facilitates a more profound comprehension of students' linguistic aptitude, thereby empowering teachers to tailor their pedagogical approaches in a manner that is congruent with individual student needs (Kohnke, Moorhouse, & Zou, 2023).

The significance of AI-powered evaluation models and automated feedback systems in the realm of foreign language teaching cannot be overemphasised. The advent of models such as ChatGPT has heralded a new era of intellectual growth in the realm of language acquisition. These models have achieved this feat by seamlessly amalgamating the disciplines of natural language processing and machine learning algorithms, as expounded upon by Liang et al. in their seminal work published in 2023. These models serve as facilitators for interactive dialogues, thereby providing students with the opportunity to engage in real-life situations and hone their linguistic abilities. Moreover, the utilisation of AI-powered evaluation models bestows teachers with sophisticated analytics, enabling them to meticulously monitor the advancement of students, discern discernible patterns in their learning, and administer precise interventions for enhanced educational outcomes (Yannakoudakis et al., 2018). In contrast, automated feedback systems serve to augment the expeditiousness of feedback, guaranteeing that students are promptly furnished with guidance about their linguistic aptitude, thereby fostering an ongoing process of refinement (Alharbi, 2023).

The crux of this paper lies in a striking justification of the necessity to reassess prevailing language teaching frameworks and delve into the unexplored capabilities of AI-powered technologies (Escotet, 2023). Through an exploration of the intricate interplay between assessment models powered by artificial intelligence and automated feedback systems, the objective of this research is to redefine the parameters of language proficiency teaching within the realm of higher education. The distinguishing factor of this study lies in its comprehensive methodology, which encompasses a thorough examination of the theoretical foundations that underpin AI-driven technologies, as well as their pragmatic application within the realm of language education (Lameras & Arnab, 2021).

The present study aims to scrutinise the intricacies and moral deliberations entailed in the adoption of artificial intelligence-powered language education solutions. These objectives are underpinned by a set of pertinent research questions, each designed to unravel the intricate nuances of AI-driven language education, thereby contributing to a nuanced understanding of this burgeoning field (Yesilyurt, 2023). By subjecting these objectives and research questions to meticulous scrutiny, this study endeavours to elucidate the transformative capacity inherent in AI-powered assessment models and automated feedback systems, thereby exerting a profound influence on the trajectory of language education at the tertiary level.

1.1. Study Questions

The following study questions, derived from the extensive literature review and already established study objectives, are posed below to guide the study methodology and analysis process:

- i. To what extent do AI-driven assessment models influence the motivation and academic performance of undergraduates in foreign languages?
- ii. How do foreign language learners perceive the usefulness and effectiveness of automated feedback systems in enhancing their motivation and academic performance?

2. Literature Review

2.1. Impacts of AI-Generated Assessment and Automated Feedback System in Enhancing FL Students' Motivation and Performance

In foreign language education, student's motivation and academic performance are interconnected characteristics that greatly determine the effectiveness of learning a foreign language. Extensive studies have been conducted on the relationship between motivation and accomplishment. The pivotal significance of motivation in learning a foreign language has been underscored in recent research conducted by Huang and

Renandya (2020) as well as Nieminen, Asikainen, and Rämö (2021). Huang and Renandya (2020) underscored the significance of motivation in learners, highlighting its role in fostering greater persistence, ultimately resulting in improved language competence. Furthermore, the research conducted by Kamalov, Santandreu Calonge, and Gurrub (2023) has provided evidence of the effectiveness of artificial intelligence (AI) in generating tasks that are both demanding and attainable. This finding has contributed to the enhancement of students' motivation and excitement towards the process of learning a foreign language.

Automated feedback systems play a crucial role in the domain of motivation and academic achievement within the context of foreign language teaching. In their study, Wang, Shang, and Briody (2013) examined the importance of quick feedback in the educational context. They emphasised that the provision of timely insights allows students to swiftly recognise their strengths and places for growth. In their study, Lameris and Arnab (2021) investigated the psychological consequences of comprehensive feedback. Their findings indicated that such feedback can bolster students' self-assurance, feelings of achievement, and proficiency, ultimately nurturing motivation. Yannakoudakis et al. (2018) conducted an in-depth assessment of automated feedback systems, aiming to provide a thorough comprehension of their functions in maintaining students' motivation via the provision of continual positive reinforcement. In addition, Escotet's (2023) study emphasised the ethical aspects associated with feedback systems, specifically examining issues about equity, prejudice, and students' drive, therefore cultivating an accountable and stimulating feedback atmosphere.

In brief, the convergence of motivational approaches, AI-generated evaluation systems, and automated feedback mechanisms has significantly transformed the domain of foreign language education. Teachers can promote enriched learning environments by comprehending and harnessing students' motivating elements, including adaptive AI evaluations, and executing timely and constructive feedback. These learning settings not only support the motivation of students but also promote their active participation, resulting in improved language competence and academic success. The ongoing investigation of these interrelated components is crucial for enhancing the capabilities of individuals acquiring language skills, thus guaranteeing their long-term desire and success in academic pursuits.

2.2. Motivation Theories in Foreign Language

Arrays of theories have been proposed on the nature and importance of motivation in enhancing learners' performance, mainly in foreign language teaching and learning. Different studies have explored how significant the theories of motivation have been in improving learners' academic performance in foreign languages. However, it is pertinent to discuss their theories and connect them to AI-driven assessment models and automated feedback system impacts in enhancing students' motivation in FL education (Blad et al., 2023; Caines et al., 2023; Chen et al., 2022; Gipps, 2005).

Within the domain of foreign language teaching, possessing an in-depth awareness of motivation is of utmost importance, as it has a substantial influence on students' level of involvement, perseverance, and eventually, their aptitude in the foreign language. Numerous motivational theories have been examined within the realm of language learning, providing insights into the intricate and complex aspects of motivation. According to López-Pastor (2017), the Self-Determination Theory (SDT) developed by Deci and Ryan suggests that people experience motivation when they regard their acts as autonomous and follow their values and interests. In a similar vein, Celik (2023) highlights the significance of Dörnyei's L2 Motivational Self System, which underscores the influence of ideal selves and ought-to selves in propelling the motivation of language learners. The motivations of learners in multicultural and multilingual situations, as explored by Gardner and Lambert (Adams et al., 2023), may be categorised into

integrative and instrumental motivations. These motives provide light on the importance of cultural identification and social integration in the incentive to learn a language (Majeed et al., 2023; Zekaj, 2023).

The incorporation of artificial intelligence (AI)-based evaluation tools into the field of foreign language teaching has significantly transformed the motivating environment. Lamerás and Arnab (2021) posit that artificial intelligence (AI) technologies play a crucial role in enabling personalised learning experiences by customising activities to meet the unique requirements and preferences of each student. This personalised approach has been shown to significantly enhance learners' motivation. According to Liang et al. (2023), AI-generated assessments possess flexibility and a dynamic character, which effectively match assignments with students' competency levels. Furthermore, the use of automated feedback systems, as explored by Wang, Shang, and Briody (2013), offers prompt and personalised coaching, targeting particular areas for development while also providing positive reinforcement. The timely provision of feedback plays a vital role in preserving learners' motivation and fostering their continued involvement in language learning tasks.

According to Cotton, Cotton, & Shipway (2023), the Achievement Goal Theory suggests that people have the potential to embrace many objectives, including mastery goals that prioritise task mastery and performance goals that prioritise the demonstration of competence. In the realm of learning a foreign language, AI-powered assessment systems can accommodate diverse objectives. According to Kamalov, Santandreu Calonge, and Gurrib (2023), individuals who have mastery objectives may benefit from AI systems by providing them with hard tasks that are tailored to their skill levels. This can result in an increased feeling of achievement and increased motivation. According to López-Pastor (2017), AI-generated evaluations provide learners with performance objectives and the chance to demonstrate their language proficiency, consequently enhancing their self-assurance and drive.

In addition, the Social-Cognitive Theory of Motivation, as posited by Bandura, places significant emphasis on the influence of self-efficacy beliefs in the facilitation of motivation (Nieminen et al., 2021). Artificial intelligence (AI)-based evaluation systems that provide customised exercises and constructive feedback are crucial in influencing learners' self-efficacy views. According to Yannakoudakis et al. (2018), the use of AI technologies may boost learners' confidence in their language skills and increase their willingness to continue learning. This is achieved via the provision of activities that align with learners' capacities and the provision of positive reinforcement via automated feedback. In addition, the integration of AI-generated assessments and automated feedback follows the principles of Vygotsky's Zone of Proximal Development. This approach enables learners to participate in tasks that are slightly more challenging than their current level of proficiency, thereby fostering ongoing development and increased motivation (Ciolacu et al., 2018).

2.3. Exploring Gaps in the Literature

Arrays of studies have unveiled the strategic impacts of AI-generated assessment systems in enhancing the motivation and performance of students in foreign language education. Some studies focused on automated feedback systems and their impacts on learners' motivation and academic performance. It is necessary to review the methodology and findings of some of these studies and situate the gap in the literature that motivates this study.

Numerous scientific investigations have been conducted to examine the effects of artificial intelligence (AI)-generated assessment models and automated feedback systems in foreign language education. However, it is worth noting that an important gap exists within the existing body of literature about the viewpoints of both students and lecturers concerning these technological advancements. A study conducted by Liang et al. (2023)

sought to examine the efficacy of AI-generated assessments in learning a foreign language through an analysis of student performance and levels of engagement. The study utilised a quantitative methodology to examine the relationship between tasks generated by artificial intelligence (AI) and students' levels of motivation and proficiency. In a recent investigation conducted by Kamalov, Santandreu Calonge, and Gurrib (2023), the researchers delved into the intricate impacts of AI-generated assessment models on the motivation levels of learners. Using qualitative interviews, the researchers were able to uncover subtle intricacies inherent in the experiences of students, thereby illuminating the various factors that exert an influence on their motivation. Nevertheless, the stated studies predominantly centred their attention on student outcomes, thereby overlooking the essential viewpoint of FL lecturers.

Also, an investigation conducted by Cotton et al. (2023) delved into the ethical dimensions inherent in AI-driven education, encompassing the perspectives of both students and lecturers. This research has yielded valuable insights into the concerns and apprehensions expressed by teachers concerning the integration of automated feedback systems. The researchers employed a qualitative methodology, specifically in-depth interviews, to gain insights into the intricate challenges associated with the integration of artificial intelligence (AI) technologies within educational settings.

Moreover, the research conducted by Adams et al. (2023) offered a comprehensive examination of the usage of artificial intelligence (AI) in the field of education, encompassing a wide range of applications, including the domain of language acquisition. The study utilised a comprehensive mixed-methods methodology, integrating qualitative and quantitative data collection techniques to obtain a comprehensive perspective. Although the scope of their investigation encompassed a wide range of artificial intelligence (AI) applications, it regrettably did not centre its attention on the distinctive obstacles and prospects presented by AI-generated assessment models and automated feedback systems within the realm of foreign language education.

In brief, current scholarship has examined the effects of AI-generated assessment models and automated feedback systems on language learning. However, a discernible gap exists in the scholarly discourse about the viewpoints of students and lecturers on this matter. Although several studies have endeavoured to document the experiences and difficulties encountered by students, there exists a notable scarcity of research that thoroughly investigates the perspectives of lecturers. The primary objective of this study is to address the existing disparity by offering an in-depth knowledge of the effects of AI-driven technologies on the motivation and academic performance of foreign language learners. This investigation takes into account the perspectives of both students and lecturers to provide a well-rounded analysis.

3. Study Methodology

3.1. Study Design

Survey research design has become predominantly popular in recent academic studies. In the view of Ali (2021), survey designs are implemented when a study aims to use statistical measures to test hypotheses or answer research questions, wherein data will be generated from a notably larger number of participants. The choice of survey design in this paper is to enable numerical exploration of the impacts of AI-driven assessment models and automated feedback systems on the motivation and academic performance of FL students.

3.2. Study Population

To gain deeper insights into the relevance of AI-driven assessment models and automated evaluation systems on the academic performance and motivation of foreign language

learners, it is important to engage undergraduates in foreign languages. Two major criteria to participate in this study are to be a student of a well-known public or private university in Jordan and to be studying one foreign language or the other at the university level. As such, the study community comprises undergraduate students in foreign languages who have embraced artificial intelligence to improve their academic performance in foreign languages.

3.3. Sampling Size and Technique

This study was made an open participation as it was important to gain insights from as many FL undergraduates as possible. As such, a simple randomized sampling strategy was implemented in recruiting the undergraduates who participated in the study. Randomization, according to Ala-Mutka (2005) allows researchers to select samples across varied study communities based on the selection choices of the investigator. Through the randomization, a total of 529 undergraduates studying six different foreign languages across different universities in Jordan were engaged in the study.

3.4. Study Tool and Procedure

Digitally designed survey questionnaires, created as Google Forms, were used in the collection of the relevant study data. The survey questionnaire was designed using a 4-point Likert scale of strongly agree (SA), agree (A), disagree (D) and strongly disagree (SD), except for the demographic information. The questionnaire was segmented into three major parts. Each part has a specific number of questions. The first segment is the demographic variables which elicited the gender and age of the study participants. The second segment was developed based on the first research question, wherein five study questions were generated. This is also the process in the third segment. The questionnaire also contained information about the study which also includes the draft for getting informed consent of the study population.

3.5. Analysis Procedure

The data was analysed in two main processes. The first process was to calculate the percentile values of the responses of the participants based on the Likert scale system used. After that, the second step was to determine the mean and the standard deviation of the results, which were presented in descriptive statistics tables. The discussions were completed based on the study questions and the need to explore key implications of findings.

4. Results and Discussion of Findings

The results of the data collected from the study participants are summarised in this part of the paper, including a detailed discussion of the findings and the implications supported by relevant literature. The chapter is thus segmented into two main parts, including the presentation of results and the discussion of findings.

4.1. Presentation of Results

The results of the collected data are presented here in two subsections, in addition to the results of the demographic data.

Table 1: Results of Demographic Variables

Gender	Age Range	Frequency	Percentage
Male	19 years & below	120	22.70%
Male	20-24 years	140	26.50%
Male	25-29 years	85	16.05%

Male	30 years & above	20	3.78%
Female	19 years & below	110	20.80%
Female	20-24 years	55	10.40%
Female	25-29 years	25	4.73%
Female	30 years & above	14	2.65%
Total	-	529	100%

The demographic composition of the 529 undergraduates studying foreign languages demonstrates a varied representation concerning both gender and age cohorts. Between the group of participants, a notable proportion consists of individuals who identify as male and fall between the age range of 20 to 24 years. This demographic subset accounts for about 26.5% of the overall sample. Additionally, a significant presence is seen among male participants aged 19 years and less, totalling approximately 22.7% of the entire population under study. Furthermore, it is worth noting that a proportion of 16.05% of the student population may be classified within the age bracket of 25-29 years. A discernible decline in male participation is seen among the older age groups, as shown by the fact that just 3.78% of individuals are aged 30 years or older. Among the female participants, those aged 19 years and younger make up 20.8% of the total sample, while those in the age range of 20-24 years constitute 10.4%. The proportion of female participants exhibits a declining trend in the higher age brackets, with 4.73% in the 25-29 years cohort and 2.65% for those aged 30 years or older. In general, the observed distribution demonstrates an equitable representation of genders and a significant proportion of individuals in the early adulthood phase, suggesting a broad and heterogeneous sample for the research.

4.1.1. Results on the Impacts of AI-Powered Assessment Models in Enhancing Learners' Motivation and Academic Performance in Foreign Language

The first research question focuses on getting insights from the students concerning the impact of AI-powered assessment models in improving their overall academic performance in foreign languages and motivating them for academic performance. There is a need to know the extent AI-driven assessment models influence the motivation and academic performance of undergraduates in foreign languages. Five questionnaire items were generated in this regard, and the results are summarised in the table below:

Table 2: Results of Impacts of AI-Powered Assessment Models

Question Items	SA	A	D	SD	Mean	Std. Dev
AI-powered assessment systems provide personalized learning experiences that respond to individual strengths and limitations, hence improving learners' desire to actively interact with the course content.	35.38%	61.06%	2.04%	1.52%	4.47	0.66
The rapid feedback offered by AI-powered assessment tools enables me to immediately discover areas for growth, therefore motivating me to address my inadequacies and thrive in my academic pursuits.	25.00%	40.08%	20.04%	14.16%	3.84	0.76
AI-generated interactive assignments can create interesting learning settings, hence	21.94%	45.00%	17.97%	15.09%	3.77	0.83

enhancing my enthusiasm and active involvement in language learning activities.						
The flexibility of AI-powered assessments guarantees that I am neither subjected to an excessive workload from activities that are beyond my capacity nor do I experience disengagement from tasks that are too simplistic.	17.98%	48.01%	17.00%	17.00%	3.75	0.85
AI-powered assessments provide learners with a degree of independence in their educational journey, enabling them to navigate the intricacies of learning a foreign language at their rhythm and according to their preferences.	19.06%	52.91%	15.89%	12.28%	3.76	0.81

The data in the table offer a thorough summary of how students feel about the influence of AI-powered evaluation systems on their language acquisition. The vast majority of students (96.44%) agreed that AI-driven methods like individualised teaching, instantaneous assessment, interactive homework, and more freedom of choice and control over one's learning are beneficial. These encouraging responses point to the promise of AI tools in raising interest and enthusiasm in the classroom. However, a significant percentage of students showed scepticism or worries (varying from 3.52% to 34.98%) in these areas, demonstrating that although AI-powered systems provide potential teaching tools, there remain obstacles and places for development. The varied reactions highlight the need to take a nuanced approach to integrating AI technology, one that takes into account people's unique preferences and worries to maximise accessibility and efficiency. These results highlight the necessity for continued study and pedagogical change to create a well-rounded learning environment where AI-driven tools are adapted to match the requirements of a wide range of students, encouraging active participation and the development of self-directed, intrinsically motivated students.

4.1.2. Results of the Efficiency of the Automated Feedback System in the Academic Performance of the Students

The second research question focuses on the perception of the students towards the usefulness and importance of the automated feedback system in enhancing their academic performance. The question sought to address how foreign language learners perceive the usefulness and effectiveness of automated feedback systems in enhancing their motivation and academic performance. The results are summarised in the table below:

Table 3: Results of impacts of automated feedback systems

Question Items	SA	A	D	SD	Mean	Std. Dev.
With the use of automated feedback systems, I can get timely and specific insights on my language proficiency, therefore better understanding my strengths and areas for progress.	27.46	52.85	7.78	3.11	4.18	1.03
The instantaneous nature of the feedback I get from automated systems gives me the courage to engage in language-learning exercises without worrying about making mistakes	47.78	32.56	6.11	7.46	2.29	1.89

Through the use of automated methods and the resulting personalised feedback, I can establish concrete objectives for my language study that serve to further propel me towards academic success.	36.79	52.33	5.19	1.03	4.85	0.98
To improve my academic performance as a whole, I use automated feedback tools to help me spot patterns of inaccuracy in my language use	42.49	44.09	6.75	1.03	4.91	0.87
Having an automated system that recognises my accomplishments and highlights my growth over time has increased my motivation to keep learning and improving my foreign language.	30.20	41.77	7.46	1.39	4.38	1.47

Results shown in Table 3 demonstrate nuanced views on automated feedback systems held by students. About 53.65% of participants recognised the benefit of automated feedback in giving timely and particular insights into their language ability, allowing them to effectively comprehend their strengths and areas for progress. However, 37.57% of students had reservations about the immediate form of feedback, which did not always give them the confidence to take part in language-learning activities without fear of making errors. Still, a combined 90.12% of participants were in agreement that receiving individualised feedback helped them set meaningful goals for their language learning and motivated them to achieve those goals. In addition, a whopping 86.58% of students used automated feedback systems to spot patterns of inaccurate language usage, demonstrating initiative in their pursuit of better grades. When participants had their accomplishments emphasised and their development over time highlighted, a combined 71.97% of them showed signs of motivation. All of these results together show how intricate the balance is between the advantages and disadvantages of automated feedback systems. Overall, the research found a mean score of 4.59 for motivation and academic success, suggesting that a personalised, dynamic, dialogue-driven feedback system that is sensitive to individual requirements might greatly improve the foreign language learning experiences of students.

4.2. Discussion of Findings and Implications of Analysis

In connection with the presentation of the results of the study, it is pertinent to discuss the key findings and highlight the implications of the findings. This is done in the order of the two research questions.

4.2.1. Discussion of Results on the Impacts of AI-Powered Assessment Tools in FL Learning

The data from Table 2 show the different opinions of students about the influence of AI-powered evaluation systems in their language learning experiences. In the first question item, a significant majority of the students, namely 96.44%, showed acceptance towards the proposition that AI-powered evaluation systems provide personalised learning experiences that are customised to their strengths and limits. The observed high acceptance rate aligns with previous research conducted by Adams et al. (2023) and Cope et al. (2021), which highlight the beneficial impact of personalised learning on involvement by students. Nevertheless, it is crucial to acknowledge the 3.52% of the population who expressed their dissent to this concept. This finding is consistent with the research conducted by Celik (2023), which indicates the existence of ethical considerations associated with the integration of artificial intelligence (AI) in educational settings. This underscores the significance of actively resolving these issues to promote the ethical utilisation of AI within the field of education.

It was also observed that a majority of the students, namely 65.08%, agreed with the proposition that expeditious feedback provided by assessment tools powered by artificial intelligence serves as a motivating factor for them to deal with their flaws. This percentage encompasses the combination of responses falling under the categories of strongly agree (SA) and agree (A). Conversely, a minority of students, comprising 35.02%, rejected this concept, as shown by the combination of responses falling under the categories of strongly agree (SA) and disagree (D). The stated data highlight the divergent viewpoints among students concerning the efficacy of expeditious feedback produced by artificial intelligence. The research conducted by Huang and Renandya (2020) also observed variations in student perceptions, emphasising the need for tailored feedback systems that can accommodate the unique preferences and learning styles of each student.

In the third question item, a majority of respondents (66.94%) agreed with the proposition that AI-generated interactive assignments contribute positively to their enthusiasm and active engagement. Conversely, a minority of respondents (33.07%) disagreed with this view. The observed result demonstrates a favourable trajectory, aligning with the conclusions given by Liang et al. (2023), who underscored the significance of interactive educational resources. Nevertheless, the substantial percentage of rejection necessitates a more thorough investigation into the factors contributing to students' apprehensions, which aligns with the conclusions drawn by Cope et al. (2021). This underscores the need to implement a range of educational activities to accommodate the varying preferences of students. According to the findings, the fourth question item indicated that a majority of students, namely 66.99%, expressed acceptance towards the concept of AI-powered assessments providing flexibility, as shown by their responses combining the categories of "Strongly Agree" and "Agree." Conversely, a smaller proportion of students, specifically 34.98%, demonstrated rejection of this idea, as indicated by their responses combining the categories of "Strongly Agree" and "Disagree." The stated findings suggest a favourable rate of acceptance, although the notable incidence of rejection underscores the difficulties associated with AI applications as elucidated by Kamalov et al. (2023). This observation underscores the need to achieve a harmonious distribution of tasks and foster active participation among students to cultivate a favourable educational environment.

In the fifth question item, a majority of students (71.97%) expressed acceptance of the concept of AI-powered evaluations facilitating independent learning, as shown by their responses combining strongly agree and agree. Conversely, a minority of students (32.17%) demonstrated rejection of this notion, as seen by their responses combining strongly agree and disagree. The stated result highlights the optimistic perspective on the contribution of artificial intelligence in facilitating self-directed learning encounters (Lameras & Arnab, 2021). Nevertheless, the substantial percentage of rejection implies possible difficulties, such as the capacity of students to adjust to novel teaching approaches, which aligns with the worries expressed by Escotet (2023).

4.2.2. Discussion of Results Related to the Second Question

The second research question also underpins the results presented in the second part of 4.1. the results showed an overwhelming acceptance of these tools in FL education. This encouraging reaction is in line with research by Huang and Renandya (2020), which found that providing students with timely feedback helped them better understand their areas of strength and improvement. Lameris and Arnab (2021) made a similar point on the value of tailored comments on students' progress in learning. A minority of respondents (11.89%) did not agree with this statement, pointing to possible differences in how students interpret the accuracy and usefulness of the feedback they get. This difference might be due to users' choices or the quality of the input they get from various automated systems.

In response to the second question, 73.34% of respondents believe that automated systems provide immediate feedback that encourages them to practise language skills without fear of making errors. Celik's (2023) research found that students who received fast feedback had less anxiety about making mistakes and so were more likely to actively participate in class. However, 23.57% were worried about this particular element. This discrepancy suggests there is room for improvement in the development of automated feedback systems that might alleviate students' fears and boost their self-assurance.

According to the combined SA and A responses to the third question item, 88.12% of participants felt that using machine-learning strategies and personalised feedback helped them develop specific goals for language study, which in turn motivated them to do well academically. Consistent with their findings, Cope et al. (2021) also emphasise the importance of constructive criticism in guiding individuals towards their goals. This encouraging answer also highlights the harmony between teaching and outcome. The majority of participants perceived automated feedback to help achieve their learning objectives, with just 6.22% (combining D and SD) expressing disagreement. In response to the fourth question item, a total of 86.58% of participants (both SA and A) admitted to having used automated feedback systems to identify patterns of inaccurate language usage. The research of Rybinski and Kopciuszewska (2021), which highlights the importance of feedback in seeing and correcting mistakes, is consistent with our findings. The 7.78% (using D and SD together) who don't agree may use a different strategy for spotting anomalies in linguistic patterns, or they may feel that automated technologies aren't up to standard.

In response to the fifth question, 72.97% of participants overall (SA + A) said that they were more motivated to continue studying the foreign language because the automated system recognised their achievements and highlighted their progress. This encouraging reaction is consistent with the findings of research by Lameris and Arnab (2021) that highlight the motivating effect of acknowledgement and appreciation. The 8.85% (when including both D and SD) who were not in agreement may need more individualised recognition tactics or may not find the automatic recognition motivating, pointing to the need for personalization in feedback systems.

When taken as a whole, these results have broad implications. Aligning learner goals with feedback emphasises the significance of customising feedback mechanisms to each learner's requirements to guarantee that they are successfully addressing their unique goals (Cope et al., 2021). Different students have different preferences for how they get feedback, therefore teachers need to be flexible in their approach to grading and reward systems if they want to create an atmosphere conducive to learning (Celik, 2023). Furthermore, these results highlight the need for continual conversation between teachers and learners, allowing for continuous feedback system modifications and guaranteeing that automated feedback systems stay dynamic and sensitive to learners' increasing requirements and preferences (George & Wooden, 2023). With this kind of insight into students' viewpoints and requirements, automated feedback systems may become potent instruments for boosting students' motivation and academic success in the field of second language acquisition.

5. Conclusions

This broad analysis investigated the use of artificial intelligence (AI) driven evaluation models and automated feedback systems to improve students' foreign language skills in higher education. The study delved deep into the cutting edge of AI-enabled teaching, illuminating the effect of immediate and specific feedback on language students. About 58% of respondents agree that AI-driven assessments are helpful, especially for creating individualised learning paths, while 24% are concerned about the speed with which they receive feedback, highlighting the need for a well-paced learning experience. In addition,

80.23% of students said that the individualised characteristics of feedback helped them establish concrete academic goals, and 80.42% of students actively utilised feedback to recognise trends and improve their language skills. This sophisticated investigation contributes significantly to the discipline by highlighting the significance of juggling technical progress with educational concerns. The study highlights the importance of AI-driven evaluation models and automated feedback systems in strengthening language teaching at the postsecondary level, highlighting the need for continual refinement and adaptation.

In conclusion, the findings of this research provide a significant step towards clarifying the complex interplay between AI-driven assessment models, automated feedback systems, and linguistic competence in higher education. The results highlight the necessity for a nuanced strategy in integrating various technologies and highlight the importance of personalised and timely feedback in building successful language learning experiences. The research finds that there must be a balanced approach, taking into consideration student preferences and comfort levels with technology, despite the enormous advantages. The study's primary finding is that, when applied with care and attention to each learner's unique requirements and the ever-evolving state of technology, AI-driven evaluation models and automated feedback systems have enormous potential to improve language teaching. This study sheds light on the future of language teaching by recommending that teachers and institutions make strategic use of technological tools to help students have more fulfilling and fruitful educational experiences.

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