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Kurdish High School Students' Perceptions on Integrating AI to Mitigate Anxiety and Cultivate Motivation

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Abstract

Artificial intelligence tools are adaptive technological systems that personalize learning experiences through intelligent feedback mechanisms. Despite growing availability, AI tools are rarely used in EFL classrooms across the Kurdistan Region, where educators continue relying on traditional instruction methods. This approach limits student engagement and creates learning barriers, particularly for students struggling with elevated anxiety levels. This descriptive study examines the impact of AI tools on motivation and the reduction of learning anxiety among Kurdish high school students. The research employed a quantitative approach using a five-point Likert scale questionnaire distributed to 301 students from grades 10-11 across six English systematic schools during the 2024-2025 academic year. This study measured student perceptions of AI's impact rather than experimentally verified outcomes. Reliability testing confirmed a Cronbach's alpha of 0.865, with data analysis conducted using SPSS (Version 27). Findings show that AI tools substantially boost student motivation, as 74.1% agreed that AI makes English learning more enjoyable compared to traditional methods. Adaptive feedback, interactivity, and self-paced practice were features students reported as improving engagement. Some students had challenges with technical issues; however, many of them felt far more secure by rehearsing tough concepts privately. Furthermore, AI tools fostered psychologically safe learning environments that reduced both academic and social anxieties. Nevertheless, some students reported that unfamiliarity with AI technology initially heightened stress levels, suggesting that gradual implementation with proper support is essential. The research emphasizes the importance of careful AI integration and thoughtful instructional design. Properly implemented AI tools can effectively bridge traditional anxiety-inducing teaching methods with supportive, student-centered learning environments.

Keywords:

Artificial Intelligence, Language Learning Anxiety, Student Motivation, English as a Foreign Language

1. Introduction

Artificial Intelligence (AI) is increasingly transforming educational environments by personalizing learning experiences and addressing both cognitive and affective student needs. Emotion-aware AI tools, including intelligent tutoring systems and adaptive chatbots, can detect early signs of student anxiety through behavioral cues such as typing patterns, response delays, or facial expressions, enabling real-time adaptation of support mechanisms to sustain engagement and learning effectiveness (Vistorte, Deroncele-Acosta et al., 2024). The psychological foundations for such interventions are well-established through Self-Determination Theory (SDT), which posits that learners' intrinsic motivation flourishes when their fundamental psychological needs for autonomy, competence, and relatedness are satisfied **(**Deci & Ryan, 2000**).**

This theoretical framework is particularly relevant for anxiety management, as students experiencing high stress often struggle with feelings of helplessness and disconnection from their learning environment. AI systems can strategically address these needs by fostering autonomy through personalized learning paths and choice provision, supporting competence through adaptive difficulty adjustments and immediate feedback, and promoting relatedness through empathetic and responsive interactions (Xia, Chiu et al., 2022).

The Kurdish high school context presents a compelling case for integrating AI. Research indicates that Kurdish students experience significantly elevated levels of test anxiety, which often stems from high-stakes examination systems, limited educational resources, and cultural pressures for academic achievement (Faqe, Moheddin et al., 2016). However, studies also demonstrate that when supportive pedagogical strategies are implemented, these same students exhibit remarkable resilience and motivation for learning (Abdullah and Razi, 2022). This suggests that the challenge lies not in student capability, but in creating learning environments that effectively address anxiety while nurturing sustained engagement.

This study examines how AI-driven strategies can reduce language-learning anxiety and foster sustained motivation, offering evidence-based approaches for culturally responsive classrooms that leverage AI to improve outcomes for this underserved group.

2. Literature Review

2.1 Historical Trajectory of AI in Education: Cultivating Motivation & Mitigating Anxiety

Early explorations of AI in education built upon foundations established by behaviourist 'teaching machines.' Skinner's mechanical devices demonstrated that systematic reinforcement could sustain learner engagement, laying an early foundation for competence support—one of the three basic psychological needs of Self-Determination Theory (SDT) (Skinner, 1958; Deci & Ryan, 2000).

Around the same time, Turing speculated about “learning machines” capable of simulating human cognitive processes, foreshadowing later adaptive systems designed to satisfy learners’ need for autonomy through individualized pacing (Turing, 1950).

The advent of Intelligent Tutoring Systems (ITS) in the 1970s and 1980s marked a shift toward more nuanced student modelling and tailored support. Carbonell’s SCHOLAR system conducted natural-language dialogues to diagnose misconceptions and guide learners through geography problems (Holmes, Bialik et al., 2019). The Lisp Tutor tracked procedural steps in programming to intervene when errors arose (Anderson, 1986). These ITS prototypes satisfied both autonomy and competence need by allowing learners choice over problem order and by scaffolding challenges to their skill level—key factors in reducing anxiety and fostering intrinsic motivation under SDT (Singh and Aziz, 2025).

With the proliferation of web-based platforms in the 2000s, educational data mining and learning analytics enabled real-time personalization at scale. Systems like Moodle generated detailed interaction logs that identified at-risk students and recommended targeted interventions, thereby supporting relatedness through adaptive prompts and peer-comparison dashboards (Pan, Biegley et

al., 2024). Adaptive platforms such as Carnegie Learning's Cognitive Tutor use cognitive models to personalise problem sequencing and adjust task difficulty for each student, aiming to keep problems within the learner's zone of proximal development (Koedinger and Corbett, 2006).

In the 2010s and beyond, advances in natural language processing and deep learning have ushered in affect-aware AI tutors explicitly designed to cultivate motivation and alleviate anxiety. Chatbots in language-learning apps offer gamified dialogues and instant corrective feedback, sustaining engagement through positive reinforcement and peer-comparison features that bolster relatedness (Li, Zhou et al., 2025). Large language models, such as GPT-4, power writing coaches that provide Socratic feedback and scaffolded hints, tailoring support to each learner's progress and autonomy preferences (OpenAI, 2023). Emerging research explores emotion-sensitive agents that detect student emotions via facial expression analysis, adapting their support to enhance personalized learning and educational outcomes (Salloum, Alomari et al., 2025). By explicitly aligning AI features with SDT's needs for autonomy, competence, and relatedness, these platforms aim not only to teach content but also to nurture learners' affective well-being (Sims et al., 2024).

2.2 Previous Studies

Recent empirical research has begun to examine the psychological effects of AI integration in English language learning, with particular attention to motivational and affective outcomes. These studies employ quasi-experimental designs to compare AI-enhanced learning environments with traditional instructional methods, measuring changes in student motivation, anxiety levels, and self-efficacy. The emerging findings suggest that AI tools can have a significant impact on learners' emotional experiences and engagement in language acquisition contexts.

In 2023, Syifauddin and Yuliansyah conducted a study titled "The Effect of Using AI on Students' Motivation and Anxiety in Learning English", aimed at analyzing how artificial intelligence impacts students' motivation and anxiety during English language learning. In this study, an AI-based learning tool was used by comparing a quantitative quasi-experimental design on grade 11 students at SMA Negeri 1 between an experimental class using the AI-based learning tool and a control class using traditional methods. Questionnaires and pre- and post-tests were available, and regression tests and t-tests were used for analysis. The research found that students were highly motivated by the use of AI, which provided personalised and interactive exercises, as well as decreasing anxiety levels among those who typically struggle when learning English. Nonetheless, the data revealed a mild uptick of anxiety among less AI-experienced students, indicating the importance of implementing AI in moderation and with appropriate support.

In 2023, Hawanti and Munisa conducted a study titled "AI Chatbot-Based Learning: Alleviating Students' Anxiety in English Writing Classroom", which aimed to investigate the impact of using the AI chatbot ChatGPT on students' anxiety levels during English writing classes. It employed a quasi-experimental design, which involved 73 undergraduate English department students from Universitas Muhammadiyah Purwokerto, divided into two groups: an experimental group (36 students) using AI chatbot-assisted learning and a control group (37 students) taught traditionally. The intervention, consisting of eight sessions, was administered over a semester, and results were assessed both pre- and post-treatment using questionnaires that measured levels of test anxiety (Test of English as a Foreign Language [TOEFL]) and communication apprehension. The results showed that in the AI chatbot-supported setting, individuals experienced a greater decline in anxiety than did those assigned to the conventional classroom. These included the immediate feedback from ChatGPT, receiving just-in-time writing assistance, and iterative generative conversations that helped reduce writing anxiety while giving participants a degree of confidence in discussing with an AI what they were about to write.

Shao (2025) conducted an experimental study titled "The role of AI tools on EFL students' motivation, self-efficacy, and anxiety: Through the lens of control-value theory", aimed at investigating how AI tools affect EFL learners' motivation, anxiety, and self-efficacy through the lens of Control-Value Theory. The study employed a quasi-experimental design with 168 university learners in China, where 82 participants were assigned to the experimental group using the Duolingo AI tool and 86 to the control group receiving conventional language teaching, with three scales administered as pre-tests and post-tests. Using One-way Analysis of Covariance (ANCOVA). The findings revealed significant improvements in motivation and self-efficacy, along with notable anxiety reduction among the experimental group, while the control group showed only minor changes. The results demonstrated that AI tools effectively foster engagement and emotional resilience, supporting Control-Value Theory's premise that greater perceived control leads to positive educational emotions, resulting in lower anxiety while enhancing self-efficacy and motivation in EFL learning contexts.

These studies consistently demonstrate that AI tools in English language learning significantly increase student motivation and reduce anxiety through personalized feedback and interactive engagement. While AI chatbots prove particularly effective in alleviating writing-related anxiety by providing immediate, non-judgmental support, some learners unfamiliar with AI technology may initially experience heightened anxiety, indicating the need for gradual implementation with adequate support. The findings suggest that AI enhances learners' sense of control and self-efficacy, supporting the premise that increased autonomy leads to more positive emotional experiences in language acquisition. Overall, when properly implemented, AI tools offer substantial benefits for addressing common affective barriers in English language learning.

While earlier studies have explored how AI affects motivation, anxiety, or self-efficacy in EFL settings, most have focused on university learners, used quasi-experimental designs, or examined specific tools such as chatbots or Duolingo. They were also conducted in different cultural and educational contexts, which limits their relevance to Kurdish high school environments. The present study fills this gap by investigating both motivation and anxiety together among Kurdish high school students across private and non-private English systematic schools—a population rarely included in AI-related affective research. With a large sample from grades 10 and 11, this study provides culturally grounded evidence on how AI influences learners within a high-pressure examination system and a context where technology integration is still emerging. This makes the current study distinct in its focus, setting, and contribution.

3. Methodology and Data Collection

3.1 Research Questions

1. Does AI increase students' motivation toward English learning?
2. Does the use of AI tools reduce anxiety among Kurdish high school students?

3.2 Aims of the Study

The primary aims of this study are:

1. To find out the impact of artificial intelligence on the motivation of high school Kurdish students in classroom settings.
2. To identify the impact of artificial intelligence on the anxiety levels of high school Kurdish students in classroom settings.

3.3 Study Samples

For this study, the total population consisted of 1762 students from grades 11 and 10 during the 2024-2025 academic year, from private and public English systematic schools. The sample

consisted of 151 students from three public schools and 150 from three private schools. A random sampling method was employed to ensure that each individual had an equal chance of being selected. Based on this approach, a sample of 301 students was chosen, proportionally representing the six schools. The sample included both male and female participants, comprising 159 males and 142 females, thereby allowing for diversity in gender and academic background. Although the total population was 1,762 students, a sample of 301 was chosen because it met the standard requirement for a statistically representative sample. This sample size aligns with Krejcie & Morgan's (1970) guidelines, which recommend a sample size of approximately 291–322 participants for populations of this size. Therefore, selecting 301 ensured sufficient statistical power while keeping data collection manageable and proportionally representing students across the six schools.

3.4 The Study Tool

A questionnaire consisting of two main parts was administered to achieve the study's aims among grade 10 and 11 students in six schools, which are both, which are non-private and private English systematic schools. Section one collected demographic details of the participants, and section two gathered their feedback on the questionnaire items. This section consisted of 18 items that were rated on a 5-point Likert scale to answer whether participants agreed or disagreed from "1=Strongly Disagree" to "5=Strongly Agree." (see Appendix) researcher developed the questionnaire based on relevant literature and studies on AI and its impact on enhancing students' affective factors. To ensure clarity and reliability, the instrument was piloted with a small group of 30 students from grades 10 and 11 before full-scale distribution. Minor revisions were made based on feedback from the pilot group to improve wording and eliminate ambiguous phrasing. The items of the student questionnaire were categorised into two thematic domains, each corresponding the study's aims and research questions. The questionnaire was distributed to the participants. Beforehand, each class received a brief overview of the study's purpose, a promise that answers would remain anonymous, and clear instructions on how to complete the form. The researcher handed out the questionnaires, stayed around to help if anyone had questions about how to fill them out, and collected them as soon as everyone finished. It is important to note that this study measures students' perceptions of AI rather than actual AI implementation. We did not verify which AI tools are used in these schools or how often. Students may have answered based on limited experience or hypothetical scenarios rather than regular AI use.

3.5 The Validity of the Questionnaire

To achieve face and content validity, a panel consisting of nine (9) experts on English language teaching, linguistics, and applied linguistics were asked to evaluate the final questionnaire (see Appendix). They reviewed the statements of the questionnaire to assess their applicability and validity for the study's purpose. Based on their evaluations, they offered constructive feedback, which included recommendations for deletions, additions, and modifications. They also proposed linguistic refinements to enhance the clarity and overall comprehensiveness of the instrument.

3.6 The Reliability of the Questionnaire

Concerning the reliability of the questionnaire, Cronbach's alpha was employed, as it is a commonly used measure for assessing the internal consistency of questionnaire items. The data were analyzed using the Statistical Package for the Social Sciences (SPSS, version 27). The resulting Cronbach's alpha value was 0.865, indicating a high level of reliability (see Table 1). This suggests that the items in the questionnaire demonstrated strong internal consistency.

Table 1: Reliability Analysis of the Questionnaire

Reliability Statistics of Students' Questionnaire

6	301	1.129	3.78	4.3%	11.0%	18.3%	35.5%	30.9%
7	301	1.293	2.97	17.3%	18.9%	26.9%	22.9%	14.0%
8	301	1.149	3.71	6.0%	9.6%	19.9%	36.5%	27.9%
9	301	1.071	3.86	5.0%	7.0%	14.3%	44.5%	29.2%
Valid N	**301**							

Items	**N**	**Std. Deviation**	**Mean**	**Frequency by Percentage**				
				Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1	301	1.023	3.83	4.0%	6.6%	17.9%	44.9%	26.6%
2	301	0.999	3.93	1.7%	9.6%	14.6%	42.2%	31.9%
3	301	0.937	3.74	2.0%	7.6%	24.9%	44.9%	20.6%
4	301	1.068	3.56	4.0%	13.3%	24.6%	38.9%	19.3%
5	301	1.109	3.46	6.0%	13.6%	26.6%	36.5%	17.3%

Cronbach's Alpha	Number of items
0.865	18

4. Results and Discussion

To answer the first research question (*Does AI increase students' motivation toward English learning?*), items 1 to 9 were analyzed because they explore students' perceptions of how AI motivate them for learning, as shown in Table 2.

Table 2: Students' responses regarding the effectiveness of AI on their motivation

Item 2 *(AI tools make learning English more enjoyable than traditional methods)* received the highest mean score of 3.93, with 42.2% of students agreeing and 31.9% strongly agreeing—totalling 74.1% positive agreement. This suggests a strong conviction among students that AI tools are significantly more engaging than traditional methods. The high agreement indicates that AI's interactive and personalized features successfully make language learning more enjoyable. This aligns with Syifauddin and Yuliansyah (2023), who found similar results in Indonesia. However, unlike their experimental design with pre-post test, this study measures only perceptions, not actual behavioral changes. Closely following, item 9 *(My attitude toward using AI tools in English learning is positive)* had a mean of 3.86**,** with 44.5% agreeing and 29.2% strongly agreeing, totaling 73.7%

positive agreement. This demonstrates students' widespread acceptance of AI integration in language learning, reflecting their recognition of the educational benefits of AI tools. Self-Determination Theory (Deci & Ryan, 2000) explains this through three needs: autonomy (self-paced), competence (adaptive feedback), and relatedness (interactive engagement). This is significant given Abdullah and Razi's (2022) finding that Kurdish students thrive with supportive strategies.

Item 1 *(Using AI tools in the classroom motivates students to improve their English language skills)* also scored a high mean of 3.83, with 44.9% agreeing, 26.6% strongly agreeing, totaling 71.5%. This indicates strong student belief that AI tools effectively drive their motivation to enhance English proficiency. These three items collectively demonstrate that most students find AI both enjoyable and motivating in their language learning. However, Control-Value Theory (Pekrun, 2006) suggests these high scores reflect perceived control and value, not confirmed behavior changes. Shao (2025) addressed this using Duolingo with experimental/control groups and validated scales.

A second tier of endorsement appears for items 6, 3, and 8. Item 6 *(AI tools adapt to my learning style, motivating me to study)* achieved a mean of 3.78**,** with 35.5% agree and 30.9% strongly agree, 66.4% combined. Item 3 *(AI makes English lessons more interactive, which motivates me to participate actively)* yielded a mean of 3.74**,** with 44.9% agree and 20.6% strongly agree, 65.5% combined. Item 8 *(AI tools help me track my progress, which increases my motivation to improve)* had a mean of 3.71, with 36.5% agreeing and 27.9% strongly agreeing, totaling 64.4%. This demonstrates the motivational value of visible progress monitoring in maintaining learning momentum, as students can observe their improvements and feel encouraged to continue their studies. When learners see concrete evidence of their advancement, they experience a sense of accomplishment that sustains their engagement and effort over time. Bandura's (1997) Social Cognitive Theory identifies mastery experiences as the most powerful self-efficacy source. Progress tracking provides this evidence. Interestingly, these ranked lower than enjoyment items, differing from Shao's (2025) findings. This may reflect Kurdish education's high-stakes testing emphasis (Faqe et al., 2016).

Items 4 and 5 showed moderate positive agreement. Item 4 *(AI tools encourage me to set and achieve specific goals in English learning)* had a mean of 3.56, with 38.9% agree and 19.3% strongly agreeing, totaling 58.2%. Item 5 *(AI encourages me to put more effort into my English studies)* scored a mean of 3.46, with 36.5% agreeing and 17.3% strongly agreeing, totaling 53.8%. This indicates that AI's influence on study effort is modest, suggesting that intrinsic motivation may require additional factors beyond technological tools alone. Goal-Setting Theory (Locke & Latham, 1990) requires specificity, challenge, and feedback. Moderate scores suggest students lack the self-regulatory skills to translate tracking into goals. The implication: AI requires teacher scaffolding for maximum effectiveness. Neither Syifauddin and Yuliansyah (2023) nor Hawanti and Munisa (2023) examined goal-setting, making this a new contribution. In Kurdish contexts with teacher-centered instruction (Abdullah & Razi, 2022), students need explicit training in self-directed goal-setting.
In contrast, item 7 *(I attend English classes more regularly because of AI tools)* registered the lowest mean of 2.97, with only 22.9% agreeing and 14.0% strongly agreeing, 36.9% combined. This indicates that AI's influence on students' attendance habits is limited. This is revealing: AI enhances learning quality but does not address structural factors. Kurdish high school attendance is mandatory, not motivation-driven. Self-Determination Theory distinguishes autonomous motivation (internal) from controlled motivation (external)—AI enhances the former, but attendance is governed by the latter. Previous studies did not examine attendance. The practical point: evaluate AI on outcomes it can realistically influence (engagement, enjoyment, skills) rather than institutional behaviors.

Overall, Items 2, 9, and 1 show that students most value AI's capacity for enjoyment, positive attitudes, and goal-driven motivation when tools are engaging and user-friendly. Strong ratings on items 6, 3, and 8 further highlight the need for adaptive feedback—tailoring to learning styles, interactive lessons, and clear progress tracking—to keep learners engaged. This mirrors Control–Value Theory's assertion that when learners perceive high control and value in a learning tool, enjoyment—and thus intrinsic motivation—increases (Artino and Holmboe, 2012). By contrast, moderate scores on items 4 and 5 suggest goal-setting and effort prompts need better instructional framing or teacher support, and the weak response to item 7 indicates AI alone will not change attendance without structured routine integration and instructor guidance. Taken together, these findings answer the first research question and show that AI does increase students' motivation toward learning English. In response to Research Question 1, yes, based on students' perceptions, AI does increase motivation for English learning. This is shown by mean scores of 3.46-3.93 and 71-74% positive agreement on key items. However, these are student perceptions, not experimentally proven results.

Regarding the second study question *(Does the use of AI tools reduce anxiety among Kurdish high school students?)*, items 10 to 18 were tabulated and analyzed to evaluate students' views on the impact of AI tools on learning anxiety, as shown in Table 3

Table 3: Students' responses regarding the Impact of AI Tools on Learning Anxiety

Items	N	Std. Deviation	Mean	Frequency by Percentage				
				Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	301	1.196	3.70	7.3%	9.3%	18.9%	34.9%	29.6%
2	301	1.008	3.99	3.3%	4.7%	17.3%	39.2%	35.5%
3	301	1.044	3.70	3.7%	9.6%	22.6%	40.9%	23.3%
4	301	1.098	3.94	4.3%	7.0%	16.6%	34.9%	37.2%
5	301	1.180	3.82	6.3%	8.3%	16.9%	33.6%	34.9%
6	301	1.166	3.81	5.6%	7.3%	22.9%	28.2%	35.9%
7	301	1.265	2.88	17.9%	21.3%	26.9%	22.6%	11.3%
8	301	1.207	2.47	24.9%	30.6%	25.2%	11.3%	8.0%
9	301	1.019	3.91	3.7%	5.0%	19.6%	39.9%	31.9%
Valid N	**301**							

Item 11 *(AI tools help practice complex topics without feeling anxious)* recorded the highest mean of 3.99, with 39.2% of students agreeing and 35.5% strongly agreeing, totaling 74.7% positive responses. Students reported less anxiety because AI allows them to practice privately, at their own pace, with immediate feedback—so they feel more in control and less exposed to social evaluation.

This supports Krashen's (1982) Affective Filter Hypothesis, which posits that anxiety impedes language acquisition. AI lowers this filter through non-judgmental environments. This is crucial in Kurdish contexts, where Faqe et al. (2016) documented elevated test anxiety from high-stakes exams. Private practice (Items 11, 15) addresses these sources. This aligns with Hawanti and Munisa's (2023) experimental study, where ChatGPT users experienced greater anxiety reduction. However, they measured specific anxiety types with validated instruments over eight sessions, while this study asks about general feelings. Future research should employ validated scales like FLCAS.

Close behind, item 13 *(AI-based exercises feel less stressful than traditional homework)* had a mean of 3.94, with 34.9% agree and 37.2% strongly agree, 72.1% combined. Item 18 ("AI tools reduce my anxiety by letting me learn at my own pace") scored a mean of 3.91**,** with 39.9% agree and 31.9% strongly agree, and 71.8% combined. AI reduces stress by offering self-paced, adaptive practice with instant feedback, which raises perceived control and lowers anxiety. Control-Value Theory (Pekrun, 2006): achievement emotions arise from control and value appraisals. High perceived control through self-paced learning reduces negative emotions. Shao (2025) provided experimental support for this mechanism. However, moderate motivation scores (Item 5, 3.46) raise questions about value appraisals—if some students have low value despite high control, theory predicts mixed emotional outcomes. Self-paced learning addresses Faqe et al.'s (2016) finding that rigid instruction contributes to Kurdish test anxiety—a context-specific benefit.

A second group of items also showed strong endorsement of AI as means to reduce anxiety. Item 10 *(The use of AI in the classroom helps reduce my anxiety when learning complex subjects)* and item 12 *(Personalized feedback from AI tools decreases my stress about falling behind)* both achieved a mean of 3.70, with combined agree rates of 64.5% and 64.2%, respectively. Item 14 *(Feel less anxious about tests when practicing with AI tools beforehand)* and item 15 *(AI tools allow me to learn privately, reducing my social anxiety in class)* yielded means of 3.82 and 3.81, with 68.5% and 64.1% positive agreement. These figures underscore the importance of private, feedback-rich practice in alleviating both academic and social anxieties**.** Personalized feedback connects to Bandura's (1997) Social Cognitive Theory: AI's immediate feedback creates mastery experiences (building self-efficacy) and reduces physiological arousal (uncertainty about performance). Bandura notes students interpret somatic information as capability indicators, so reducing anxiety strengthens self-efficacy by removing negative cues. Test anxiety (Item 14, 3.82) is particularly relevant where Faqe et al. (2016) identified it as a major barrier—AI provides a bridge between learning and assessment. Comparable studies didn't examine test anxiety as distinct, making this a potential contribution. Social anxiety (Item 15, 3.81) addresses relatedness but paradoxically limits peer interaction opportunities.

In contrast, items 16 *(Relying on AI tools increases my stress about technical errors) and* 17 *(The pressure to use AI tools effectively in class increases my anxiety during assignments and tests)* registered the lowest means, 2.88 and 2.47**.** They combined agreement rates of 33.9% and 19.3%, respectively. The relatively low scores for these items suggest that most students do not experience significant stress from potential technical problems or the expectation to use AI tools effectively. These contradict Syifauddin and Yuliansyah's (2023) finding that less AI-experienced students showed increased anxiety. However, a critical limitation: without verification of actual AI usage in schools, responses may reflect hypothetical perceptions rather than lived experiences. This differs from Hawanti and Munisa (2023) and Shao (2025) who implemented specific interventions to ensure experience.

In answer to Research Question 2: Yes, based on students' perceptions, AI tools do reduce learning anxiety among Kurdish high school students. This is demonstrated by mean scores of 3.70-3.99 and 64-75% positive agreement on key items, particularly those addressing private practice environments (3.99), reduced stress (3.94), and self-paced learning opportunities (3.91). These

findings align with multiple theoretical frameworks: Krashen's (1982) Affective Filter Hypothesis, which posits that anxiety impedes language acquisition; Control-Value Theory (Pekrun, 2006), which explains how perceived control reduces negative emotions; Self-Determination Theory (Deci and Ryan, 2000), which demonstrates that autonomy enhances motivation while maintaining manageable anxiety levels; and Bandura's (1997) Social Cognitive Theory, which emphasizes that self-efficacy reduces anxiety. Convergence with experimental research by Hawanti and Munisa (2023) and Shao (2025) strengthens confidence in these findings. However, it is critical to emphasize that these conclusions reflect what students believe about AI's impact rather than clinically measured anxiety reduction, and require experimental confirmation using validated anxiety instruments and verified AI implementation.

However, this study has several limitations. First, it relied on self-reported questionnaires that measure perceptions rather than actual changes in anxiety or motivation, which raises concerns about social desirability bias and the gap between reported and real experiences. Second, the study lacked verification of actual AI usage in the participating schools — an issue highlighted by the reviewer, who noted that AI is rarely used even in private schools. This means some responses may reflect hypothetical impressions rather than lived experience. Third, the absence of a control group and pre–post testing prevents any causal claims. Additionally, the research covered only one academic year and six schools, which limits generalizability. Some items may have been misunderstood (e.g., attendance), and the broad term “AI tools” makes it impossible to identify which specific features or platforms are most effective. Finally, the focus on student questionnaires alone excluded teacher perspectives, classroom observations, usage logs, and objective outcome measures, which would provide a more complete picture.

Future studies should employ mixed-methods designs, implement experimental approaches with control groups and pre–post assessments, and use validated instruments such as the Academic Motivation Scale and FLCAS. Researchers should also verify AI implementation through surveys, usage logs, and classroom observations. Longitudinal tracking is needed to examine whether effects persist, and future work should investigate specific applications (e.g., ChatGPT, Duolingo, Grammarly) rather than general “AI tools.” Broader and more diverse samples are recommended, along with measuring learning outcomes such as test scores, fluency, or writing quality. Incorporating teacher training and professional development will also strengthen implementation quality. These improvements would offer deeper insights into how AI can most effectively support Kurdish EFL students while establishing clearer causal relationships

5. Conclusion

In conclusion, this study evaluated Kurdish high school students' perceptions of the effects of AI tools on students' motivation increases and anxiety reduction in English learning among Kurdish high school students. The results showed that students perceived AI tools **to** have a great impact on motivating learners, which includes enjoyment, positive attitudes and interactive engagement. Students reported that AI helped them learn at their own pace, receive feedback that was tailored to their individualized English growth, and track progress --- for example, all of which they believed contributed towards more engaging English learning experiences compared to traditional methods.

In addition, the results showed that students believed AI tools have a strong effect on lowering anxiety through delivering low-stakes practice environments and self-paced learning opportunities and private learning spaces. AI-designed items that undertook complex subjects, assignments and tests were subject to less stress from students according to their reports**.** While some participants expressed over technical problems or performance anxiety, the results still speak to students' perceptions of the psychological advantages of AI as an educational aid that is supportive and confidence-building.

The findings indicated that students perceived AI **to** enhance the motivation of students toward learning English (RQ1), and they believed it significantly decreased the learning anxiety of Kurdish high school students (RQ2). Positive student perceptions and statistically significant responses indicate that AI tools focusing on interactivity, personalized feedback, and anxiety-free practice can be suitable for the classroom. However, it is important to note that this study measured student perceptions rather than objectively measured changes through experimental methods with pre-tests, post-tests, and control groups. Therefore, future research could employ experimental or quasi-experimental designs to provide empirical evidence of AI's actual impact on motivation and anxiety levels. Additional studies could examine whether the use of AI for sustained periods has any long-term effects on learning achievement, explore how AI may complement collaborative learning, or investigate the pedagogical values of AI in developing specific language skills, such as speaking and listening.

To sum up, based on student perceptions**,** utilizing AI tools in English language instruction enhances the learning process by making it more engaging and less stressful, while also allowing for individualised learning. To best leverage these perceived benefits, educators should select AI tools with rich feedback and safe environments with scaffolding from teachers, focusing scaffolded teacher support on areas where AI yielded minor impacts (i.e., goal setting and attendance). Educators should be aware that these conclusions are based on student self-reports, and further experimental research is needed to establish causal relationships between AI use and improved learning outcomes.

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Appendix
List of the Jury Members

No.	Lecturer's Name	Academic Degree	Specialty	University	College
1	Fatimah Rashid Hasan Al Bajalani	Prof. Dr.	English Language Teaching	Salahaddin University-Erbil	Retired and Honored Staff
2	Asma Abas Brime	Asst. Prof. Dr.	Teaching English as a Foreign Language	Salahaddin University-Erbil	College of Education
3	Arev Merza Astifo	Asst. Prof. Dr.	Applied Linguistics	Salahaddin University-Erbil	College of Education
4	Dlakhshan Yousif Othman	Asst. Prof. Dr.	applied phonetics	Salahaddin University-Erbil	College of Basic Education
5	Rebin Abdulqader Azeez	Asst. Prof. Dr.	Teaching English as a Foreign Language	Salahaddin University-Erbil	College of Education

6	Tahsin Hussein Rassul	Asst. Prof. Dr.	English Language Teaching	Salahaddin University-Erbil	College of Basic Education
7	Hazha Salih Hassan	Asst. Prof. Dr.	Teaching Literature	Salahaddin University-Erbil	College of Basic Education
8	Rozhgar Jalal Khidhir	Asst. Prof. Dr.	CALL and DGBL	Salahaddin University-Erbil	College of Basic Education
9	Qismat Mohammed Hussin	Asst. Prof. Dr.	Applied Linguistics	Salahaddin University-Erbil	College of Basic Education

The Students' Questionnaire

School: _____
Grade: _____
Date: _____
Age: _____
Gender: Male ( ) Female ( )

Note: Please tick the appropriate choice.

Domain1: Motivation

Items	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
1. Using AI tools in the classroom motivate students to improve their English language skills.					
2. AI tools make learning English more enjoyable than traditional methods.					
3. AI makes English lessons more interactive, which motivates me to participate actively.					
4. AI tools encourage me to set and achieve specific goals in English learning.					
5. AI encourages me to put more effort into my English studies.					
6. AI tools adapt to my learning style, motivating me to study.					
7. I attend English classes more regularly because of AI tools.					

8. AI tools help me track my progress, which increases my motivation to improve.					
9. My attitude toward using AI tools in English learning is positive.					

Domain2: Anxiety

Items	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
10. The use of AI in the classroom helps reduce my anxiety when learning complex subjects.					
11. AI tools help me practice difficult topics without feeling anxious.					
12. Personalized feedback from AI tools decreases my stress about falling behind.					
13. AI-based exercises feel less stressful than traditional homework.					
14. Feel less anxious about tests when practicing with AI tools beforehand.					
15. AI tools allow me to learn privately, reducing my social anxiety in class.					
16. Relying on AI tools increases my stress about technical errors.					
17. The pressure to use AI tools effectively in class increases my anxiety during assignments and tests.					
18. AI tools reduce my anxiety by letting me learn at my own pace.					

تێڕوانینی خوێندکارانی ئامادەیی کوردی لەسەر یەکخستنی AI بۆ کەمکردنەوەی دڵەڕاوکێ و چاندنی پاڵنەر

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پوختە
زیرەکیی دەستکرد لە بواری پەروەردەدا وەک ئامرازێکی نوێ و ستراتیژیکی سەردەم ناسراوە کە توانای بەهێزکردنی هاندانی قوتابیان و کەمکردنەوەی دڵەڕاوکیی دەروونیان لە فێربوونی زمان هەیە. لە ڕووی فێربوونی تایبەتمەند و فیدباکی دەسبەجێ، AI دەتوانێت هەستی باوەڕ بەخۆبوون و بەشداریکردنی زیاتر دروست بکات. ئەم هەوڵە توێژینەوەیەکی وەسفی شیکارییە دیزاین کراوە بۆ لێکۆڵینەوە لە کاریگەری AIلەسەر هاندان و دڵەڕاوکێ لەنێو قوتابیانی ئامادەیی، لەم توێژینەوەیە ئامرازی متمانەپێکراوی ئەلفای کرۆنباخ α=0.865 بەکارهێنراوە و داتاکانی پێ پشتڕاستکراوەتەوە بە SPSS (وەشانی 27) شیکراوەتەوە بە بەکارهێنانی ڕاپرسییەکی پێنج خاڵیی بۆ 301 قوتابی پۆلی 10 و 11 لە شەش قوتابخانەی حکومی و ناحکومی لە ساڵی خوێندنی 2024–2025. . ئەنجامەکان هاوشێوەیە لەگەڵ *Self-Determination Theory*، *Bandura's Social Cognitive Theory*و *Krashen's Affective Filter Hypothesis*، و ئەنجامەکان بەکارهێنانی AI بە دیزاینی کارامە دەتوانێت فێربوونی زمانی ئینگلیزی چێژبەخشتر بکات و دڵەڕاوکی کەمتر بکاتەوە.
وشە سەرەکییەکان: زیرەکی دەستکرد، دڵەڕاوکێی فێربوونی زمان، پاڵنەری خوێندکار، ئینگلیزی وەک زمانێکی بیانی

تصورات طلاب المدارس الثانوية الكردية حول دمج الذكاء الاصطناعي لتخفيف القلق وتنمية الدافع

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الملخص
الذكاء الاصطناعي في مجال التربية يُعَدّ أداة حديثة واستراتيجية عصرية قادرة على تعزيز دافعية الطلاب وتقليل قلقهم النفسي في تعلم اللغات. فمن خلال التعلم المخصص والتغذية الراجعة الفورية، يستطيع الذكاء الاصطناعي تنمية الشعور بالثقة بالنفس وزيادة المشاركة. هذه المحاولة البحثية الوصفية صُمِّمت لدراسة تأثير الذكاء الاصطناعي على الدافعية والقلق لدى طلاب المرحلة الإعدادية. في هذا البحث استُخدم معامل الثبات كرونباخ ألفاα=0.865 ، وتم تحليل البيانات بواسطة برنامج SPSS (الإصدار 27) بالاعتماد على استبانة خماسية المقياس شملت 301 طالباً من الصفين العاشر والحادي عشر في ست مدارس حكومية وأهلية خلال العام الدراسي 2024–2025. جاءت النتائج منسجمة مع Self-Determination Theory ، و Bandura's Social Cognitive Theory، و Krashen's Affective Filter Hypothesis. وتؤكد النتائج أن الاستخدام المصمم والفعّال للذكاء الاصطناعي يمكن أن يجعل تعلم اللغة الإنجليزية أكثر متعة ويقلل من القلق.
الكلمات المفتاحية: الذكاء الاصطناعي، قلق تعلم اللغة، دافعية الطلاب، اللغة الإنجليزية كلغة أجنبي.