Mixed-Methods Studies in English Language Teaching
2(2), 123-148. https://doi.org/10.71873/mslt.2025.1207897

Research Article

Boosting Academic Buoyancy and Resilience in Iranian EFL Learners through an AI Translation Bot: A Mixed Method Study

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Abstract

Growing interest in translation-oriented Artificial Intelligence reflects its potential to enhance translation quality, yet its effects on learners' academic buoyancy and resilience remain underexplored. The present research aimed to examine the effects of using the Camera Translator Application on improving academic buoyancy and resilience indices. This study employed a mixed-methods design, consisting of a quasi-experimental pretest–posttest design in the quantitative phase and post-treatment interviews in the qualitative phase. From a pool of 118 junior English translation undergraduates at Islamic Azad University, Tehran, 44 intermediate EFL participants were selected using the Oxford Placement Test (OPT) and were randomly assigned to experimental and control groups. The treatment phase lasted 13 weeks, with one 90-minute session per week, during the second semester of the 2024–2025 academic year. Participants in the experimental group were instructed to use the AI-based Camera Translator Application, whereas those in the control group followed the conventional approach to translation courses. Participants in both groups completed the Academic Buoyancy Scale and the Academic Resilience Scale before and after the treatment, serving as pretests and posttests. The data collected from the pre- and posttests were analyzed using SPSS version 27. The qualitative phase was conducted through interview sessions using semi-structured, open-ended questions. Results from both the quantitative and qualitative phases confirmed that the experimental group significantly outperformed the control group in translation performance, while also showing improvement in academic buoyancy and resilience indices. The findings may benefit stakeholders, practitioners, materials developers, and syllabus designers by encouraging the adaptation and integration of new technologies, such as AI bots, into the curriculum to enrich translation performance and enhance practitioners' buoyancy and resilience.

Keywords: academic buoyancy, academic resilience, artificial intelligence (AI), translation bots

Cite as: Teimourtash, M. (2025). Boosting academic buoyancy and resilience in Iranian EFL learners through AI translation bots: A mixed-methods study. *Mixed-Methods Studies in English Language Teaching*, *2*(2), 123-148. https://doi.org/10.71873/mslt.2025.1207897

Received: 25/07/2025; **Revised**: 26/08/2025; **Accepted**: 07/09/2025; **Published**: 22/09/2025
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1. Introduction

The advent of new technology in the field of education has gained increasing popularity. New technologies and smart devices have posed various challenges for foreign/second language learners. At the same time, the advantages they offer have been numerous and surpassed the challenges. Most EFL learners are advocates of the new technologies, most significant of which is the Artificial Intelligence (AI) bots and applications, and researchers (e.g., Derakhshan & Fathi, 2023; Maghsudi et al., 2021) confirmed that AI Toolkits enhanced the efficacy and productivity of academic and educational programs. The increasing pace of applying AI Bots in educational realm has drawn the attention of many researchers in the field to delve more specifically into the issue and its influence on teaching and learning agendas.

Much research has been devoted to different aspects of language learning, encompassing motivating language learners, self-regulation and L2 achievement notions (Wei, 2023). In addition, AI bots have been shown to act interactively and compensate for the partner positions which could be utilized by EFL learners to improve their speaking ability (Khasawneh, 2023). Moreover, some researchers (e.g., Zou et al., 2023) suggested that AI bots would provide EFL learners with opportunities to experience collaborative instances and settings in order to facilitate language practice. Similarly, other studies (e.g., Huang et al., 2023; Son et al., 2023) have been conducted to spotlight the high adaptability and better engagement the AI-based bots provide EFL learners with.

The integration of AI-driven bots could also provide EFL learners with a personalized assistant in the process of self-assessment continually as Kargar Behbahani et al. (2024) believe that the introduction of AI bots into the field of assessment would enhance its nature and turn it into a dynamic assessment. The notion of assessment is so pivotal in academic and education zone (Poehner & Lantolf, 2023) that provides a key measure of both program effectiveness and learners' developmental progress (Zhang, 2023). Therefore, if EFL learners view AI bots as personalized assessment tools, these tools could fill the long-standing gap left by traditional assessment practices (Zarei & Rahmaty, 2021). They may also offer proper scaffolding and interactive support for the practitioners and in the long run, facilitate the language skills acquisition process (Levi & Poehner, 2018), whether used independently or as supplementary aids.

Building on this, the present study focuses specifically on the Iranian context. EFL learners in Iran and more specifically, English translation discipline undergraduates have long been suffering from ack of personalized support, whether human or technological, to assess their progress in translation. Therefore, the present study sought to find a suitable remedy for such problem through AI-driven translation bots. Finally, in considering the broader educational context, practitioners often face a choice: resist new phenomena and remain attached to tradition, or embrace change and turn challenges into opportunities. The current study investigated how integrating camera-based AI translation bots affects the academic buoyancy and resilience of Iranian novice translation undergraduates. To accomplish this aim, the researcher posed the following research questions:

RQ 1: Does integrating AI-Translation Application have any statistically significant impact on Iranian EFL learners' academic resilience?
RQ 2: Does integrating AI-Translation Application have any statistically significant impact on Iranian EFL learners' academic buoyancy?
RQ 3: What are Iranian EFL learners' impressions of utilizing Artificial Intelligence Translation Bots?

2. Literature Review

2.1. Academic Buoyancy

The notion of academic buoyancy is rooted in the realm of positive psychology which encompasses both negative and positive emotions, highlighting that the success of language practitioners in any instructional program is dependent upon both aspects (MacIntyre et al., 2019). Scholars such as Gregersen (2013) asserted that positive psychology could in turn facilitate the educational process meanwhile it could make the academic journey more enjoyable. All the events educators might experience during their academic growth provide opportunities to become more flexible and buoyant. The opportunities encompass all the events inside or outside the classroom setting, namely the stress they tolerate during exams or withstanding the pressure of unbalanced deadlines and many others (Martin & Marsh, 2008). It is taken for granted that all the fluctuations of the language learning process are considered under the umbrella term of academic buoyancy (Yun et al., 2018), through which all challenges, opportunities, threats, and anxieties in the language learning process could be accommodated. The notion of academic buoyancy is in close relation with the notion of academic resilience (Martin & Marsh, 2008), where the former deals with the everyday impeding setbacks

and controversies, while the latter encompasses severe difficulties that language learners might encounter. The relation between the two constructs of academic buoyancy, which has a reflective and reactive fashion towards educational adverse situations, and the academic buoyancy, which has a proactive fashion of reflection, is a complementary and not contradictory, while one might not guarantee or predict the other (Xu & Wang, 2022).

In the literature, academic buoyancy is interpreted as various constructs. Hiver (2017) has proposed immunity as buoyancy confronts the challenges to minimize the probable damages an event might cause. Hiver and Dörnyei (2017) also suggested Hardiness as a proper substitute for buoyancy as it might decrease the stress and pressure that the practitioners experience in the process. Similarly, some scholars (Putwain et al., 2016; Somerfield & McCrae, 2000) called buoyancy as Coping, through which the sources of the anomalies are eradicated, modified or alleviated. Some scholars (Martin, 2013; Martin et al., 2021) have illuminated the outcomes of the academic buoyancy and asserted that it would entail learner autonomy and self-efficacy for the practitioners because it empowers language learners to monitor and analyze their learning experiences. Yun et al. (2018) concluded that academic buoyancy is in direct proportion with learners' achievements. Jahedizadeh et al. (2019) also carried out a thorough investigation on academic buoyancy and the impact of institutionalizing the construct of academic buoyancy among EFL learners. Their investigation led to the development of an accredited questionnaire. In line with the research studies conducted by other scholars (Martin et al., 2013; Putwain et al., 2015; Yun et al., 2018), they confirmed that there exists a strong interconnectedness between the academic buoyancy and language achievements, and buoyancy could be regarded as the best predictor of learning and acquisition.

2.2. Academic Resilience

The notion of academic resilience is closely related to academic buoyancy, with distinctions that are not always clear at a surface level but could be considered as the facilitator of one another. Martin and Marsh (2009) regarded the academic resilience as the accidental emergence of academic adversities which may hinder or impede the educational and academic processes. The term resilience was best described as the individuals' capacity to face and handle the inevitable adversities during the academic journey (Namaziandost & Heydarnejad, 2023). Of course, adversity is inherently idiosyncratic, and it might differ from one person to another just because many factors, including the individuals' culture, background, walks of life,

individuals' capacity for critical thinking, the levels of higher- and lower-order thinking (Malmir & Mohammadi, 2018). In the same vein, Beltman (2021) proposed four global approaches in dealing with the construct. In an individualistic approach, one would display personal traits in facing an adverse situation during the academic progress. In strategic approach, the individuals might display various reactions depending on the common interface of the adversities the individuals encounter with the variety of processes or strategies. As a context-specific approach, the third approach was the focus of attention for many researchers. Johnson et al. (2014) conducted a thorough investigation on the issue and concluded the weak form encompasses individuals' background and prior experiences, whereas the strong form embraces cultural, political, economic, and social dimensions. The last one is the system-specific approach, which focuses on the adversities emerged as the byproduct of interventions acting upon or within any systems or their subsystems.

Along the same vein, Allan et al. (2014) studied 1534 participants from a UK university and found that female undergraduates displayed more uniformity of resilience in confronting adversities of academic achievements in comparison with male undergraduates whose resilience index was less straightforward. In a study conducted by Namaziandost et al. (2023), it was confirmed that there existed a strong interconnectedness between and among emotion regulation, self-confidence, critical thinking, and resilience index, resulting in smoother progress in their academic achievements and educational success. A great body of literature is devoted to view the same educational and academic agendas from resilience index as well as buoyancy index in various academic contexts. Ding and He (2022) asserted that academic buoyancy is in close constructive correlation with academic tenacity and dedication in academic achievements. Also, Martin (2014) believed that buoyancy and conquering unpleasant adversities is found to be highly and tightly interconnected. Some researchers (e.g., Heydarnejad et al., 2022; Nurjamin et al., 2023) conducted studies to delve into the buoyancy and resilience constructs, asserting that EFL language learners' psychological and mental readiness in confronting educational adversities and hindrances were intensively inspired by their buoyancy index. Derakhshan et al. (2020) found that EFL educators' effectiveness was strongly influenced by the needs, emotions, and stresses experienced along the educational process and the academic adversities.

With the gradual introduction of technology into the field of education, there has been a plethora of studies devoted to the effects of computer-based teaching in this respect. Studies on online instruction, e-mentoring, and virtual education highlight both opportunities and challenges (Cross & Polk, 2018;

Guasch et al., 2010). Hybrid approaches combining online and traditional methods have been proposed to address these challenges (Alzahrani & O'Toole, 2017; Eichelberger & Leong, 2019). Research continues to examine factors such as learners' attitudes toward technology, digital competence, and the effects of artificial intelligence (AI) on TEFL contexts (Javier, 2020; Pari, 2024; Teimourtash & Teimourtash, 2021). By linking resilience with technological adaptation and innovative teaching methods, researchers can better understand how learners overcome both personal and systemic challenges in modern educational contexts.

3. Method

3.1. Design

This research employed a mixed methods experimental research (Creswell, 2022). In the quantitative phase of the study, a quasi-experimental pretest/posttest, control group design was run with Iranian EFL learners' translation discipline undergraduates. The independent variable was the integration of AI translation bots into translation tasks. The dependent variables were the participating students' resilience to new technology, academic buoyancy, and AI-related translation competency. The qualitative phase was conducted through semi-structured open-ended interviews concerning the impressions of EFL translation undergraduates on introducing AI translation bots into English translation. The new AI technology competency and reactive versus proactive reflection of translation practitioners were the focus of attention in this phase of research.

3.2. Participants

The participants of the present study were chosen from the subject pool of 118 junior English translation undergraduates from Islamic Azad University, Tehran. An Oxford Placement Test (OPT) was administered, and 44 students at the intermediate proficiency level were selected. They were randomly assigned to two identical groups of 22: an experimental group and a control group. The OPT ensured that all participants possessed the intermediate language proficiency compulsory for the study. Participants included both male and female students, with ages ranging from 19–29 years. The study was conducted in the second semester of the academic year 2024-2025. Participants provided written informed consent, and the study was approved by the university's ethics committee. Confidentiality of data was guaranteed and protected throughout the study.

3.3. Instruments

The researcher used three instruments in the present study: the *Oxford Placement Test* (OPT), the *Academic Buoyancy Scale*, and the *Academic Resilience Scale*. The *Oxford Placement Test* was administered to observe the homogeneity of the participants in terms of English proficiency before the study. It has demonstrated robust reliability and validity locally and globally, making it a suitable tool for assessing English language proficiency.

To measure the participants' academic buoyancy in the present study, the researcher chose the *Academic Buoyancy Scale* developed and modified by Jahedizadeh et al. (2019). This instrument was previously used with Iranian EFL learners, whose cultural and social background were similar to that of the current participants. The questionnaire consisted of 27 questions on a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Its reliability was acceptable, with Cronbach's alpha values between 0.82 and 0.87. Its validity was also checked by two TEFL/translation university professors, who both confirmed its validity for this study.

As the third instrument of the study, the *Academic Resilience Scale*, developed by Wagnild and Young (1993), is a seven-point Likert scale instrument, consisting of 25 questions. It has been widely used and translated into 36 languages (Wagnild, 2013). The reliability of the questionnaire was supported, with Cronbach's alpha values, ranging from 0.84 to 0.95. Two TEFL/translation professors also confirmed the suitability of this scale for the present study. It is worth highlighting that language proficiency test of OPT was only administered once and prior to the treatment sessions, whereas the other two instruments were administered at both pretest and posttest phases.

To explore the integration of AI tools into TEFL, a semi-structured interview protocol was adapted from Kohnke et al. (2023) The protocol was modified and approved by two TEFL/translation university professors. It is noteworthy that the semi-structured interview protocol was reviewed and approved by two TEFL/translation university professors. Nearly all participants in the experimental group voluntarily attended interview sessions, and their answers were transcribed and analyzed through thematic analysis (Braun & Clarke, 2006) to find out the impression of AI applications' integration with their translation tasks. The semi-structured interview questions were as follows:

- How familiar are you with artificial intelligence (AI) bots?
- What are the impressions of both teachers and learners in receiving help from AI bots? Could you elaborate on the issue?

- What was your own experience of early AI bots use in learning English? Did AI bots meet your expectations? Give example.
- Compared with your experience in learning or translating English texts, how did you find it? Facilitative or debilitative? Elaborate some.
- Do you believe in total devotion to AI or complete ignorance of AI in learning or translating English texts? In either case, elaborate briefly why?
- Do you believe that specific language skill is needed when utilizing AI-translation bots?
- How do you judge and how much do you rely on the products of AI translation bots?
- What is your impression on replacing AI bots instead of human translation? Provide answer concerning the ethical issues.
- What were the real drawbacks of AI-bots integration and how do you believe the challenges could be overcome?

3.4. Procedure

The present study aimed at displaying the impact of implementing AI bots on enhancing the academic buoyancy and resilience of translation undergraduates. To conduct the study, a total of 118 junior undergraduates at Islamic Azad University in Tehran participated in this study. All students completed an English proficiency test (OPT), through which 44 students with intermediate-level proficiency were selected. They were randomly assigned to two equivalent groups: an experimental group and a control group

Pretests consisted of the *Academic Buoyancy Scale* and the *Academic Resilience Scale,* which were administered before the start of the treatment sessions. The treatment sessions spanned thirteen consecutive weeks during the second semester of the academic year 2024-2025. The participants in both groups attended a course, titled *Translation of Simple/General Texts*, which is a standard part of the undergraduate curriculum in translation studies at university in Iran. The course followed a predetermined syllabus and was delivered once a week in 90-minute sessions throughout the semester.

The control group followed the conventional fashion translation instruction, in which EFL learners practiced translating the texts provided by the teachers. Students were allowed to use electronic or paper dictionaries, and the teachers corrected the translated texts as needed. The experimental group was introduced to the AI-based Camera Translator Application and asked to

use it on their smart devices such as smartphones, tablets, or laptops. They were instructed to use it to examine suggested equivalents for words, phrases, expressions, and sentences, and to produce paraphrased translations without copying the output of the application verbatim. The participants were asked to produce paraphrased or interpreted translations of source texts, using the application as support but without copying its output. The AI application served as a scaffolding tool, decreasing the need for repeated dictionary searches and allowing students to engage with more texts within the same treatment period.

After thirteen sessions, the same pretests were readministered as posttests, and both groups completed the *Academic Buoyancy Scale* and *Academic Resilience Scale.* The buoyancy and resilience scores before and after the treatment went through statistical analysis to address the research questions of the study.

3.5. Data Analysis

To prepare the dataset for analysis, normality and homogeneity assumptions were examined. The skewness and kurtosis indices were inspected, and all values fell within the acceptable range (±2), indicating that the data did not significantly deviate from a normal distribution. Homogeneity of variances was further tested using Levene's test, and the results confirmed that the groups were statistically equivalent at baseline.

For the main quantitative analyses, descriptive statistics (means and standard deviations) were first computed for academic buoyancy and academic resilience across pretests and posttests. Subsequently, inferential statistical tests were conducted using SPSS version 27. Independent-samples *t*-tests were employed to compare experimental and control groups at both the pretest and posttest stages for each dependent variable. When applicable, paired-samples *t*-tests and one-way ANOVA were also applied to examine within-group improvements across time. The significance threshold was set at $p < .05$ for all analyses.

In the qualitative phase, semi-structured interviews were conducted with volunteers from the experimental group after the treatment. Data from the interviews were analyzed thematically. Responses were transcribed, coded, and grouped into recurrent themes reflecting learners' perceptions of the integration of AI translation applications in their language learning practices. These qualitative findings were used to complement the quantitative results and provide deeper insight into participants' experiences.

4. Results

4.1. Results for Preliminary Data Analysis

The normality of the data distribution was assessed using skewness and kurtosis indices, displayed in Table 1.

Table 1
Descriptive Statistics; Testing Normality of Data

Group		N	Skewness			Kurtosis		
		Statistic	Statistic	Std. Error	Ratio	Statistic	Std. Error	Ratio
Experimental	Pretest	22	0.32	0.37	0.86	-0.53	0.75	-0.71
	posttest	22	-0.33	0.37	-0.89	0.18	0.75	0.24
Control	Pretest	22	0.22	0.37	0.58	-1.14	0.75	-1.52
	Posttest	22	-0.09	0.37	-0.24	0.43	0.75	0.57

As shown in Table 1, all skewness and kurtosis ratios fell within ±1.96, indicating no significant departure from normality.

The descriptive statistics were calculated for the pretest and posttest academic buoyancy and academic resilience scales of the experimental group (Table 2).

Table 2
Descriptive for Academic Buoyancy and Academic Resilience: Experimental Group

Measure	n	Min	Max	M	SD
Academic Buoyancy					
Pretest	22	2.48	4.05	3.52	1.77
Posttest	22	3.02	5.83	3.92	1.07
Academic Resilience					
Pretest	22	2.62	3.48	3.17	1.02
Posttest	22	2.73	4.84	4.71	1.86

As showed in Table 2, the experimental group's academic buoyancy scores increased from the pretest (M = 3.52, SD = 1.77) to the posttest (M = 3.92, SD = 1.07). Also, Similarly, academic resilience showed substantial improvement, rising from the pretest (M = 3.17, SD = 1.02) to the posttest (M = 4.71, SD = 1.86). Table 3 displays the descriptive statistics for the academic buoyancy and academic resilience scales in the control group.

Table 3
Descriptive for Academic Buoyancy and Academic Resilience: Control Group

Measure	n	Min	Max	M	SD
Academic Buoyancy					
Pretest	22	2.63	4.87	2.39	1.69
Posttest	22	3.03	3.81	2.78	1.01
Academic Resilience					
Pretest	22	2.56	3.66	3.31	1.56
Posttest	22	2.61	4.69	3.27	1.89

Table 3 displayed that the control group's academic buoyancy scores showed only a slight increase from the pretest (M = 2.39, SD = 1.69) to the posttest (M = 2.78, SD = 1.01). Academic resilience scores remained largely stable, with pretest values (M = 3.31, SD = 1.56) and posttest values (M = 3.27, SD = 1.89)

4.2. Answering the First Research Question

The first research question in the present study dealt with academic resilience and examined the effect of AI translation application on Iranian intermediate EFL learners' academic resilience. To this end, an independent samples t-test was run and the performance of the two groups in the pretest and posttest was compared. Table 4 displays the results of the independent samples t-test for academic resilience in the pretest.

Table 4
Independent Sample T-test Results for Academic Resilience at Pretest

				Levene's test		Independent-samples t-test		
Group	n	M	SD	*F*	*p*	*t*	df	p (2-tailed)
Experimental	22	3.17	1.02	0.08	.73	0.34	42	.71
Control	22	3.31	1.56					

According to Table 4, Levene's test indicated that the assumption of homogeneity of variances was met (p > .05). The t-test results showed no significant difference between the groups, with the experimental group (M = 3.17, SD = 1.02) and the control group (M = 3.31, SD = 1.56), $t(42) = 0.34$, p = .71. These findings suggest that the two groups were equivalent in academic resilience prior to the intervention. Afterward, their performance on the posttest was calculated and displayed in Table 5.

Table 5
Independent Sample T-test Results for Academic Resilience at Posttest

				Levene's test		Independent-samples t-test		
Group	n	M	SD	*F*	*p*	*t*	df	p (2-tailed)
Experimental	22	4.71	1.86	7.32	.001	4.01	42	< .001
Control	22	3.31	1.56					

As Table 5 indicated, Levene's test indicated a significant difference in variances (p = .001), suggesting that the assumption of homogeneity of variances was violated. The t-test, adjusted for unequal variances, revealed that the experimental group (M = 4.71, SD = 1.86) scored significantly higher than the control group (M = 3.27, SD = 1.89), $t(42) = 4.01$, $p < .001$. These results indicate that the AI-based application had a significant positive effect on students' academic resilience. Therefore, the first null hypothesis was rejected. It was confirmed that the application improved Iranian intermediate EFL learners' academic resilience index.

4.3. Answering the Second Research Question

The second research question in the present study dealt with academic buoyancy and examined the effect of the application on Iranian intermediate EFL learners' academic buoyancy. To this end, an independent samples t-test was run and the performance of the two groups in the pretest and posttest was compared. Table 6 displays the results of the independent samples t-test for academic buoyancy in the pretest.

Table 6
Independent Sample T-test Results for Academic Buoyancy at Pretest

				Levene's test		Independent-samples t-test		
Group	n	M	SD	*F*	*p*	*t*	df	p (2-tailed)
Experimental	22	3.52	1.77	7.42	.001	2.54	42	.71
Control	22	2.39	1.69					

According to Table 6, Levene's test showed a significant difference in variances (p = .001), indicating that the assumption of equal variances was not met. After adjusting for unequal variances, the t-test revealed no significant difference between the experimental group (M = 3.52, SD = 1.77) and the control group (M = 2.39, SD = 1.69), $t(42) = 2.54$, p = .71. It was concluded that concerning academic buoyancy at pretest, there was no significant difference between the experimental and control groups before the treatment.

Table 7 shows the results of independent-samples t-test for their performance on the posttest.

Table 7
Independent Sample T-test Results for Academic Buoyancy at Posttest

				Levene's test		Independent-samples t-test		
Group	n	M	SD	*F*	*p*	*t*	df	*p* (2-tailed)
Experimental	22	3.92	1.07	9.36	.001	2.30	42	< .001
Control	22	2.78	1.02					

As shown in Table 7, Levene's test indicated a significant difference in variances (p = .001), suggesting that the assumption of equal variances was violated. After adjusting for unequal variances, the t-test showed that the experimental group (M = 3.92, SD = 1.07) scored significantly higher than the control group (M = 2.78, SD = 1.02), $t(42) = 2.30$, $p < .001$. It was concluded that regarding the academic buoyancy, there existed a significant difference between the participants' performance of the experimental and control groups after the treatment. Therefore, the second null hypothesis was rejected. It was confirmed that the application improved Iranian intermediate EFL learners' academic buoyancy.

4.4. Results of Qualitative Phase

The semi-structured interviews were thematically analyzed. The findings confirmed the quantitative results of the study. The following excerpts show their positive impressions of integrating AI bots into translating English texts.

Excerpt 1

> At first, I really didn't like it. I thought AI applications are really a waste of time. But little by little, I found it very interesting and involving. The ease of use and working with AI apps really surprised me, and I think AI translation bots is really what EFL learners need, and it really works.

Excerpt 2

> AI bots and applications like the Camera Translator Application we used in our translation course really influenced me and gave me self-confidence and self-assurance. The sense of being able to translate any texts anywhere with a high level of correctness was really a big breakthrough for me and I think my dreams came true.

Excerpt 3

> The power of being sufficient and being ready to confront any texts with any level of difficulty was so great that I think the equilibrium of power in the translation courses between the teacher(s) of the course and the novice translators is somehow diminished. There is no more supreme power than the teacher. Knowledge of AI is a real power, and it enables EFL learners and novice translators to take the risk and confront with any texts.

Excerpt 4

> The AI camera translator bot was a real supporter for me and it acted as a real private teacher for me. The guidance it provided me with was really very helpful because before translating a text, the AI camera translator bots provided key issues of the texts for me, and acted even better than a private teacher. Usually, private teachers might lose their temper after a couple of informative questions. So, AI translation bots let you ask as many questions as possible.

Excerpt 5

> AI bots and the AI Camera Translator Application were very overwhelming as it raised my mistakes, the misconceptions, and errors. Even though there were times I really understood the message of the texts, and I found that I had real problems with my Farsi language, and I could not convey the message in the target format. It was great, and I think the use of AI bots should become mandatory because they really work. It was as if we were involved in a learning zone of translation opportunities and we really learned by performing translation tasks.

Excerpt 6

> The accuracy and precision of the feedbacks an AI app provides could not be comparable to any human outputs. I mean I think AI translation bots we experience in the course was 100 percent reliable and in many cases the data it provided excelled our teacher. A human being might forget an idea but an AI tool would never ever make any mistakes.

Excerpt 7

> I believe cultural and ethical issues are the weak point in translation bots. That is not the problem with AI bots; the truth is that cultural and

> ethical issues are not translatable. In translating these issues, we should utilize AI apps with special care. Many of us believe that machines and AI could never replace human beings because machines cannot not think, but humans have the capability.

Excerpt 8

> Contrary to many of my friends in this course, we should not rely too much on AI apps because. In my opinion, we are turning into robots and operators in translation, and that is not good. The creativity of a translator is what makes him/her a conspicuous translator. AI is very good and extraordinarily helpful, but it cannot be compared to human cognition and their creativity.

Excerpt 9

> For sure AI translation bots are facilitative and supportive, even more than our teachers. You know, AI apps allow us to make mistakes and even repeat our mistakes, but our teachers believe that once a point was raised and rectified, the repetition or re-occurrence is taboo. In these cases, I, as a user of AI bots, feel more attraction towards using AI app.

The excerpts were common answers of the interviewees, through which it could be sensed an appreciation of AI translation bots. Technology has always been welcomed by individuals, even experts. In this case, it could be mentioned that the results of the qualitative phase also supported the facilitative and supportive stance of technology adaptability in language practices (Heift & Chapelle, 2012; Guo et al., 2022). Of course, over-reliance on new technologies (Yan, 2023), such as AI, has always been treated as a high-risk issue. The borderline between human and robots is creativity and engagement, especially in the zone of language agendas (Pavlik, 2023; Yan, 2023), and it should never be sacrificed at the foot of any technologies such as AI bots.

5. Discussion

This study investigated the impact of implementing an AI translation bot on accelerating and enhancing the academic buoyancy and academic resilience indices of Iranian EFL learners as the novice translation undergraduates. The rationale was rooted in the concepts of buoyancy and resilience as both originate from positive psychology (Xu & Wang, 2022; Putwain & Wood, 2023), which emphasizes the prominence of positive and self-help qualities in language education (Jin & Dewaele, 2018). These qualities have been shown to facilitate learners' progress and mastery of

language skills (MacIntyre & Mercer, 2014). Researchers have shown that EFL learners prefer technologies that provide immediate feedback, reduce reliance on human support, and lighten their workload (Cao, 2020; Tang & Wu, 2017; Zhia & Ma, 2022). Similarly, EFL practitioners have been motivated to integrate these technologies into their teaching practices, which can enhance instructional effectiveness (Li et al., 2019; Lang et al., 2019; Teimourtash, 2024), which guarantees the success of EFL practitioners (Mo, 2012). Conversely, academic challenges and lack of resilience can hinder learners' motivation and impede their success (Martin, 2014).

To explore strategies for overcoming academic challenges while reinforcing buoyancy among novice translation undergraduates, this study posed two research questions. The findings demonstrated that the use of AI applications by novice translation undergraduates significantly enhanced their academic buoyancy and resilience. Features such as user-friendliness, constant feedback, and independence from human scaffolding contributed greatly to the enhancement of these constructs. The experimental group outperformed the control group in translation tasks and reported that their success was largely attributable to the use of the Camera Translator Application, an AI-based tool. Interestingly, more than half of the experimental group reported that the AI-based translation app provided a clear understanding of their strengths and areas for improvement. Their primary challenge was that, although the AI apps allowed them to comprehend English texts accurately, they struggled to translate the meaning correctly into their native language, Farsi. In other words, the participants valued the AI app because it highlighted a key challenge for novice translators. While they could understand the message of English texts, accurately conveying it in Farsi remained difficult due to gaps in their native language proficiency.

The findings of the present study are in line with the study by Li et al. (2023), who concluded the adoption of new technology by EFL learners significantly enhanced their achievements. Moreover, acceptance and adoption of new technologies were found to be very decisive in enhancing learner autonomy and overcoming academic resiliencies and setbacks (Li, 2021; Tian & Zhou, 2020). Scholars argue that any new phenomenon causes new anxieties due to its novelty and learners' insufficient knowledge about it. Over time, this anxiety, as a natural reaction to adversity, may hinder EFL learners' active engagement with new developments (Datu & Yang, 2021; Entesari, et al., 2020).

Similarly, this study revealed that the user-friendly features of AI translation apps helped lower anxiety, which often acts as a barrier to accomplishing academic tasks. The findings of the present study also confirmed that motivation and engagement, as the traits of buoyancy (Thomas & Allen, 2021), could be energized and sustained when novice translation undergraduates experienced stress-free, non-human assistance.

Consistent with Kargar Behbahani et al. (2024), the present study also found that the academic buoyancy emerged through the active implementation of the AI translation application, which provided EFL learners with partial scaffolding support. Such individualistic and communicative support facilitated the acquisition process and helped learners overcome challenges with greater ease (Levi & Poehner, 2018; Van Zyl, et al., 2024).

This study concluded novice translation undergraduates must analyze and reflect on their own actions to translate texts that convey both explicit and implicit meanings. Such reflective practice aligns with the values of academic buoyancy and overcoming academic adversities. This finding aligns with Dewey's (1933) view that the ultimate goal of education is to develop individuals with the capacity to evaluate decisions and judge processes (Kuuk & Arslan, 2020). Furthermore, this study concluded that fostering academic buoyancy and maintaining resilience require normalizing the experience of failure through active involvement, which in turn may demand implementing strategies to overcome challenges and setbacks (Anderson et al., 2020; Derakhshan & Yin, 2024).

Of the prominent findings of the present study was that active integration of AI translation applications engaged EFL learners in dynamic evaluation practices (Rezai et al., 2022; Wongdaeng, 2022), which in turn forge their unique routes to success (GuoJie, 2021). In other words, the novice buoyant translator undergraduates engaged in self-reflection and self-evaluation (Zhouyuan, 2021; Huang, 2022). Of course, in the preliminary stages, the novice buoyant translator might experience vagueness and uncertainty when facing translation tasks at first and such sense of vagueness lead to helplessness and anxiety (Oteir & Al-Otaibi, 2019; Jin, et al., 2021). However, active integration and reliance on AI translation applications as partial scaffolding support helped them appropriately overcome such challenges.

6. Conclusions and Implications

The present study was conducted in the absence of sufficient research on the fields of translation studies and AI applications. In contrast to those who

consider AI bots a challenge or threat to the translation industry, this study sought to transform these threats into opportunities by actively integrating an AI-based tool, the Camera Translator Application. Through this integration, AI translation applications were conceptualized as a cornerstone (Poehner & Lantolf, 2023) and a basis for meaningful pedagogical intervention (Alemi et al., 2019; Kushki & Nassaji, 2024; Rezapour, 2024).

The findings confirmed that the integration of AI translation bots could be helpful for translators but it should be treated with special care not to over emphasis on the use of AI bots. In addition, novice translation undergraduates gained a clearer understanding of their strengths and weaknesses. As Dewey (1933) noted, reflective and critical thinking are the manifestations of academic success; therefore, the practitioners of a successful educational program should be equipped with the command of considering the gap between what they know and what they need to know (Martin & Marsh, 2009; Martin et al., 2021).

The present study suffered from some limitations such as sample size. Future research could replicate this study with the academic population of advanced level of proficiency or it could be replicated with the undergraduates of other discipline rather than English translation discipline. Further studies could also compare and assess the quality of translations by the human versus AI according to prominent translation models. The findings of the present study may be beneficial for the stake holders. Materials developers and syllabus designers, along with EFL/TEFL practitioners and educators in translation studies, could use these findings to bridge existing knowledge gaps. AI bots may serve as partial scaffolding tools to enrich teaching and learning practices.

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