

THE PREDICTIVE ABILITY OF CREATIVE SELF-EFFICACY WITH LINGUISTIC INTELLIGENCE IN A SAMPLE OF BARTIN UNIVERSITY STUDENTS

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Abstract

The study aimed to reveal the predictive ability of creative self-efficacy on linguistic intelligence of Bartın University students. In addition to revealing the differences between genders in creative self-efficacy and linguistic intelligence. The study sample consisted of (105) male and female students from Bartın University-Turkey who were selected using the available method. To achieve the objectives of the study, Linguistic Intelligence Scale of Hatem (2024) and the Creative Self-Efficacy Scale of Karwowski et al. (2018) were used. The results of the study showed that the level of linguistic intelligence and self-efficacy were high; their values were (3.78, 3.99), respectively. The results also showed that there were no statistically significant differences in the level of linguistic intelligence and the level of creative self-efficacy among Bartın University students attributed to the gender variable. The results also showed a relative contribution of creative self-efficacy to linguistic intelligence, amounting to (21.8%). The study recommends developing both linguistic intelligence and creative self-efficacy through guidance and training programs.

Keywords: Linguistic intelligence, creative self-efficacy.

Introduction

Our present era is witnessing unprecedented circumstances, including a massive information revolution, the proliferation of various audio-visual media, the spread of social media, and an unprecedented boom in the field of artificial intelligence and its various tools. These circumstances have confronted individuals with a storm of challenges that require them to be able to receive a vast amount of information and linguistic stimuli, process them, interact with them, and respond to them verbally or in writing. However, individuals remain unable to meet the demands of the era unless there are institutions to assist them. Educational institutions are the ideal place dedicated to preparing individuals with the necessary capabilities and qualifications. More specifically, they develop the ability to communicate and interact with others, both individually and in groups, and to develop written and spoken linguistic proficiency, which is expressed as linguistic intelligence. Language plays an important role in people's daily activities; it can be used to communicate, interact, and negotiate with others (Kafifah, 2016).

Many educators, psychologists, and other scholars of human intelligence have long considered intelligence a general mental ability that an individual either possesses or lacks. It has

been viewed as an innate trait with which humans are born, and thus there is little that can be done to improve or change intelligence (Davis et al., 2011). According to this perspective, intelligence is defined as the ability to solve problems or create products that are valued and appreciated by the cultural environment in which it emerges (Handayani et al., 2021).

Intelligence, in this sense, necessarily implies a fixed, unchanging ability, representing a single characteristic of the human mind. Therefore, it can only be measured and identified through a standardized instrument known as the intelligence quotient (IQ) (Erlina et al., 2011; Koklu et al., 2021). This view of intelligence has not held up well in the face of substantial empirical and realistic evidence. Theories have emerged that view intelligence as a set of abilities, such as Sternberg's triarchic model of intelligence, which includes the components of creative, analytical, and practical intelligence. Gardner's theory of multiple intelligences, according to which individuals possess eight distinct types of intelligence (Saeidi et al., 2019).

Gardner arrived at his theory of multiple intelligences as a result of his studies of children and adults with brain damage. He observed that each individual has different abilities (Koklu et al., 2021). His theory is based on a variety of sources of evidence, including neurological as well as psychological evidence (Sternberg, 2012). Through his pioneering work, Gardner introduced a new concept of intelligence as biopsychological information-processing capabilities that can be activated in a cultural setting to solve problems or create products of value within a culture (Davoudi & Chavosh, 2016).

The theory of multiple intelligences, proposed by Gardner and published in his book, "Frames of Mind," suggests that there are several relatively independent intelligences that individuals can combine in different ways. Gardner acknowledges that each person has a certain level of intelligence and a distinct intelligence pattern, and that each type can be developed in a distinct way (Maharani et al., 2020). This frees educators and students from concerns related to the traditional view of intelligence as being genetically determined at birth. This theory creates a glimmer of hope for all students that they can develop specific types of intelligence by creating educational environments and methods that foster the competencies of all students (Campbell & Campbell, 1999).

Gardner emphasizes that intelligence should be viewed in a pluralistic manner; it includes an individual's ability to respond successfully to new events and situations. Initially working on the theory, Gardner identified seven basic intelligences: linguistic, logical-logical, interpersonal, intrapersonal, musical, spatial, and bodily-kinesthetic. Later, in 1999, he added an eighth naturalistic intelligence (naturalistic intelligence). Furthermore, two years later, a ninth intelligence, existential intelligence, was added (Gardner, 2011; Erlina et al., 2011). Each of these intelligences has its own unique characteristics. In the current study, we will address linguistic intelligence because of its clear importance in students' daily lives.

Language is of paramount importance in the lives of individuals and peoples. It is a tool for communication, understanding, and conveying needs and desires. Language has many forms and variations. It may take the form of sound, body language, or signs and symbols (writing). This has given language a close connection with linguistic intelligence. Language intelligence is the skill and intelligence in using or processing words effectively, whether written or spoken. This understanding can be interpreted as linguistic intelligence, a very important verbal or nonverbal linguistic ability that all humans who use it as a means of communication with other people must possess. Languages contain skills that must be learned to develop linguistic intelligence. These skills are speaking, reading, listening, and writing. These skills must be trained and developed through the learning process within the various stages of education (Handayani et al., 2021).

Linguistic intelligence is one of the most important types of intelligence within the theory of multiple intelligences. We live in an age where listening and communication skills have become essential for success in social, professional, and work situations. While language can be conveyed through gestures and writing, it remains, at its core, a product of the vocal tract and a message to the human ear (Thomas & Perwez, 2024).

Armstrong (2018) defines linguistic intelligence as the ability to use words effectively, whether orally (e.g., a speaker) or in writing (e.g., a writer or journalist). This intelligence includes the ability to manipulate grammar or structure, knowledge of phonology or the sounds of language, semantics or meanings, and pragmatics or practical uses of language. Some of these uses include rhetoric (using language to persuade others to follow a particular course of action), instructional aids (using language to remember information), interpretation (using language to inform), and descriptive language (using language to discuss language).

Gardner believes that linguistic intelligence gives students the linguistic ability to achieve fluency in expressing themselves in different ways and distinguishing terminology—that is, language mastery, which includes grammar, literature, poetry, metaphors, similes, riddles, and abstract reasoning. Furthermore, linguistic intelligence enables students to communicate effectively using language, whether in their native language or other languages, orally or in writing. What makes this type of intelligence even more important is that it enables students to manipulate phonetics, syntax, and semantics to communicate effectively. Furthermore, those who possess this intelligence can influence how easily they learn new languages (Al-Zoubi, 2024).

This type of intelligence requires the ability to use language effectively through the skillful combination of the four skills: using language to persuade others, remember information, inform them, and talk them into taking a specific course of action. This type of intelligence is typically found in individuals in specific professions, such as poets, journalists, editors, storytellers, politicians, and novelists, including the special type of people who acquire a foreign language. Students with linguistic intelligence typically learn best by speaking, explaining, writing, listening, storytelling, reading, and analyzing grammar in relation to the subject matter they are learning (Boonma&Phaiboonnugulkij, 2014).

This type of intelligence is of particular importance, distinguishing it from other types of intelligence, as it requires the ability to use words effectively in both written and spoken communication. This type of intelligence is characterized by strong memory of comprehensive information and mastery of linguistic patterns, such as those used in storytelling, debate, discussion, and reporting related to speaking and writing. Therefore, intelligence plays a crucial role in language proficiency as one of the most influential factors in language learning (Muhammad, 2022).

In line with Gardner's idea that intelligence in general, and linguistic intelligence in particular, can be developed, there are many factors that can contribute to enhancing and developing this type of intelligence in individuals, such as continuous practice and exposure to diverse linguistic stimuli. A notable factor is an individual's personal life history, which includes interactions with parents, teachers, peers, friends, and others who either enhance or suppress intelligence. Another effective factor in developing linguistic intelligence is a society's cultural and historical background. The cultural values and intellectual and historical climate of the time and place in which an individual was born and raised can play a significant role in achieving the growth of linguistic intelligence (Armstrong, 2018).

Despite the diverse factors influencing linguistic intelligence, it will remain limited, unable to grow or develop unless the individual believes in their creative abilities and in their ability to

express themselves linguistically through creative outputs in their daily interactions. Raising individuals' expectations of success has become an important requirement, and these expectations can only be raised through creative self-efficacy, which plays a significant role in the context of creativity. Without it, an individual cannot act when faced with difficult situations due to a lack of confidence in their ability to perform creatively. Consequently, the best idea will not be realized or implemented. This belief influences expectations of success and the motivation to achieve a difficult goal. Creative self-efficacy is an educational goal, as it is considered a critical quality for creative individuals (Jobst and Meinel, 2012).

The concept of creative self-efficacy has its roots in social cognitive theory, which asserts that an individual's belief in their own abilities profoundly influences performance. According to Bandura, sustaining creativity requires a strong belief in competence, especially when engaging in creative endeavors that require significant time and effort. In such scenarios, especially when progress is frustratingly slow, outcomes are uncertain, and products face declining social value (due to their inconsistency with established norms), a stable sense of competence becomes crucial. In other words, it's not just the possession of skills that matters, but the confidence to apply those skills in specific situations (Suherman & Vidákovich, Rabbania et al., 2020).

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Creative self-efficacy has been defined as "the belief that one has the capacity to produce creative outcomes" (Chen, 2024). In this sense, effective creative self-efficacy reflects a subjective judgment of one's creative abilities or potential, which in turn influences one's choice of activities to engage in, the amount of effort they will expend, and ultimately the achievement of innovative outcomes. Creative self-efficacy is a fundamental psychological trait that researchers have explored to understand and improve individuals' creative performance. It has attracted increasing attention in the field of creativity research, and there has been empirical evidence supporting the motivational importance of creative self-efficacy and its ability to predict critical performance outcomes in both educational and workplace contexts (Shaw, Kapnek, & Morelli, 2021).

According to Bandura, individuals' perceptions of their abilities in a particular domain often predict how they will behave in certain situations. Thus, how individuals evaluate their performance on certain tasks and their confidence in their ability to perform them competently significantly influences how they behave when faced with challenging situations. Self-efficacy is a judgment individual make about their future potential and ability to succeed. Furthermore, self-efficacy beliefs place greater importance on an individual's perception of their competence than on their actual level of skill. For example, someone believes that if they successfully perform a task, they will receive a positive response, thereby increasing their self-confidence. Based on this, high self-efficacy can enhance the use of an individual's linguistic intelligence (Aghajani, 2018; Mujiono, 2023).

Many factors influence creative self-efficacy, including mastery experiences, vicarious experience, verbal persuasion, physiological and emotional states, and the integration of efficacy information. Furthermore, by prioritizing these elements, teachers can create a conducive learning

climate that not only fosters students' proficiency in linguistic issues such as writing but also fosters optimism about their abilities. This holistic approach is essential for promoting long-term academic success and resilience (Muhammad, 2022). This means that creative self-efficacy is a changeable trait within task or social context factors (Tierney & Farmer, 2011).

Research findings related to creative self-efficacy and linguistic intelligence are conflicting and have not been conclusive in demonstrating the relationship between these two variables. In a study conducted by Ahmadian and Ghasemi (2004) that aimed to identify the interrelationships between the strategies followed by language learners and their level of self-efficacy and types of intelligence (based on the theory of multiple intelligences), the results showed that self-efficacy has no significant relationship with multiple intelligences.

Mahasneh (2013) conducted a study that aimed to investigate the relationship between multiple intelligences and self-efficacy. The results showed no statistically significant difference between males and females in linguistic intelligence. The results also showed a statistically significant positive correlation between self-efficacy in all its dimensions and linguistic intelligence. The study results also indicated that (11%) of the variance in linguistic intelligence is due to self-efficacy.

In a different context, Aghajani (2018) conducted a study that examined the predictive ability of each of the multiple intelligences (generalized self-efficacy, academic self-efficacy, and self-regulatory self-efficacy) on self-efficacy. The results indicated that musical and linguistic intelligence were predictors of general self-efficacy.

A study conducted by Wang and Sun (2020) aimed to estimate the average effect size for the relationship between self-efficacy and language proficiency. A meta-analysis of 493 effect size studies on the relationship between language learners' self-efficacy beliefs and language proficiency from 74 journal articles, book chapters, and dissertations revealed a small to medium average effect size.

In a study conducted by Muhammad (2022), the aim was to identify the relationship between verbal-linguistic intelligence, self-efficacy, and students' speaking ability. The study found a relationship between verbal-linguistic intelligence and students' self-efficacy, which influences speaking ability. In a study conducted by Avila (2023), the aim was to determine the relationship between sociolinguistic competence, linguistic intelligence, and self-efficacy in teaching. The study found a significant relationship between sociolinguistic competence and teachers' self-efficacy.

A study conducted by Mujion (2023) aimed to examine the mediating role of linguistic intelligence on self-efficacy and the impact of academic engagement on academic flow. The study found no statistically significant differences between genders in the variables, while showing significant positive correlations between the study variables. The results also showed that linguistic intelligence plays a mediating role in self-efficacy (independent variable) and academic flow (dependent variable).

A study conducted by Nafisa &Putro (2024) aimed to examine the relationship between linguistic intelligence and self-efficacy. The study found a relationship between verbal linguistic intelligence, writing self-efficacy, and writing skills through direct and indirect effects.

A review of previous studies reveals that none of them addressed the relationship between creative self-efficacy and linguistic intelligence. Studies were limited to general self-efficacy or other types of self-efficacy, without addressing creative self-efficacy.

It is also evident from previous studies that they addressed the relationship between self-efficacy and linguistic intelligence among university students, such as the study by (Mahasneh,

2013), the study by (Aghajani, 2018), and the study by (Muhammad, 2022). The current study converges with previous studies in this goal, except that no study was found in the Turkish environment in general, which encouraged researchers to conduct this study.

It is also noted that previous studies did not conclusively determine the relationship between these two variables. Ahmadian and Ghasemi (2004) showed that self-efficacy was not significantly related to multiple intelligences. Muhammad (2022) found a relationship between verbal-linguistic intelligence and students' self-efficacy. Wang and Sun (2020) showed that the relationship between self-efficacy beliefs and language proficiency was moderate. Nafisa and Putro (2024) found a relationship between verbal-linguistic intelligence and self-efficacy in writing.

Previous studies have also demonstrated that they did not agree on the order of the relationship between influence and impact between these two variables. Some studies addressed linguistic intelligence as a dependent variable within a causal model, such as Mujion (2023) and Mahasneh (2013), which addressed linguistic intelligence (as the dependent variable) and self-efficacy (as the independent variable). Meanwhile, Aghajani (2018) addressed linguistic intelligence as an independent variable that influences self-efficacy. Therefore, the current study attempts to clarify the logical relationship between linguistic intelligence and self-efficacy.

The Study Problem and Questions

Humans are described as social beings, meaning they are naturally drawn to living among a group of people to which they belong and exchanging ideas. Language is the best means of ensuring this exchange. Humans employ language in their daily lives to think, listen, speak, read, and write. However, the ability to use language is not a natural ability, like breathing and walking. This ability is not inherited from birth and is not mastered automatically. Rather, it must be learned. Humans are equipped with the tools that enable them to acquire language (Al-Zaghoul et al., 2021; Ulum et al., 2021).

A student's acquisition of a language does not represent the end of the linguistic journey, but rather its beginning. No matter how well a student masters their language, they must continue to monitor linguistic developments and usage. This is because languages are inherently subject to renewal and the introduction of new terms and structures. Individuals with whom the student interacts may express their ideas in ways that are linguistically more advanced than the language used in their daily lives. This requires the student to be able to analyze the linguistic discourse addressed to them and interact with it with the same degree of complexity. This necessarily requires the student to strive to develop their linguistic intelligence and strive to advance it. Although everyone is born with linguistic intelligence, some individuals may need to work harder to enhance that intelligence by participating in activities related to linguistic intelligence (Muhammad, 2022).

Chomsky explained the creative aspect of language acquisition and use, stating that the speaking individual rediscovers language every time they speak. Therefore, his theory was called the Generative Grammar Theory of Linguistic Development (Kolak et al., 2006; Feldman, 2011). Since an individual's beliefs about themselves are among the most important motivating and guiding factors, it was necessary to investigate the impact of creative self-efficacy on achieving linguistic intelligence. Creative self-efficacy is of great importance in an individual's life, as it enables them to solve daily problems that hinder their work and activities, making them more adaptable. Creative self-efficacy reflects a subjective judgment of an individual's creative abilities and potential, which in turn influences the individual's choice of activity, their effort, and ultimately the achievement of innovative results (Shaw et al., 2021). Since the creative self-efficacy that students develop has

important consequences for their preferences, choices, and the ways they accomplish tasks, it was necessary to identify these effects on their linguistic intelligence during the university stage. This was achieved by studying the role of creative self-efficacy in predicting linguistic intelligence among BartinUniversity students, by answering the following questions:

1. What is the level of creative self-efficacy among BartinUniversity students?
2. What is the level of linguistic intelligence among BartinUniversity students?
3. Are there statistically significant differences at the significance level ($\alpha=0.05$) in creative self-efficacy and linguistic intelligence among BartinUniversity students attributable to gender?
4. What is the predictive power of creative self-efficacy on linguistic intelligence among BartinUniversity students?

Importance of the Study

Theoretical Significance: The importance of the current study stems from its examination of two fundamental psychological concepts. These two concepts are receiving significant research attention at the present time, given the challenges posed by university education in terms of the ability to communicate with others, understand academic material, and prepare for a future career. This requires the ability to deeply analyze language and express scientific and personal ideas. The importance of this study also lies in achieving research integration between specialists in psychological sciences and linguistics.

From a practical perspective, the importance of the study lies in its ability to inform parents and faculty members about linguistic intelligence and its role in achieving academic success and effective communication with others. It also provides insight into the importance of creative self-efficacy in achieving linguistic intelligence and guides them toward adopting it.

Study Limitations

The generalizability of this study's results is determined by the study sample, which was limited to students in the Faculty of Islamic Studies at Bartin University in Turkey, from whom data was collected during the first semester of the 2024-2025 academic year. The results of this study were also determined by the validity and reliability of the instruments used, as well as the descriptive and predictive methodology employed by the researchers.

Procedural Concepts of the Study

Linguistic Intelligence: The ability to use language skillfully for expressive purposes, such as rhetoric or poetry, as well as to understand and interpret the language of others through skills such as the ability to use complex words and phrases, communicate fluently verbally, and present persuasive arguments or narratives (Mujiono, 2023). Linguistic intelligence is operationally defined by the student's score on a linguistic intelligence scale consisting of (19) items.

Creative self-efficacy: The extent to which an individual believes they can produce innovative results (Tierney and Farmer, 2002). Creative self-efficacy is operationally defined by the student's score on a creative self-efficacy scale consisting of (6) items.

Method

Study Methodology: The descriptive predictive approach was followed in implementing the study to identify the predictive ability of creative self-efficacy in linguistic intelligence, given its suitability and the nature of this study to achieve its objectives.

Study Population: The study population consists of all students of the Faculty of Islamic Sciences at Bartın University, Turkey, for the first semester of the 2024-2025 academic year, totaling 868 male and female students.

Study Sample: The study sample was selected using a simple random method, from both genders (males and females). The study sample consisted of (105) male and female students (65) male students and (40) female students.

Study Tools: To achieve the study objectives, two scales were used: the first to measure linguistic intelligence, and the second to measure creative self-efficacy.

First: Linguistic Intelligence Scale

The researchers used the scale used in Hatem's study (2024) to measure linguistic intelligence. The scale consists of (19) items, each containing one sentence, with the examinee responding to it by indicating the extent to which it applies to them.

The scale has good psychometric indicators, with the internal consistency coefficient (Cronbach's alpha) and split-half reliability being (0.87) and (0.92), respectively.

Validity and reliability procedures for the current study: To verify the construct validity of the linguistic intelligence scale in the current study, the researchers administered the scale to a pilot sample of (30) male and female students from outside the current study sample. The correlation coefficient between the items and the total score of the scale was extracted. The following table shows these results:

Table (1): The correlation coefficients of each item with the with the linguistic intelligence scale.

Item	The item's correlation coefficient with the scale	Item	The item's correlation coefficient with the scale	Item	The item's correlation coefficient with the scale
1	0.49*	8	0.42*	15	0.47*
2	0.56**	9	0.47**	16	0.45*
3	0.48*	10	0.50**	17	0.46*
4	0.63**	11	0.79**	18	0.67**
5	0.68**	12	0.40*	19	0.53**
6	0.64**	13	0.64**	15	
7	0.63**	14	0.61**	16	

Table (1) shows that the correlation coefficients between the Linguistic Intelligence Scale items and the total score ranged between (0.40 and 0.79), which are appropriate and statistically significant values, indicating the construct validity of the scale.

To verify the reliability of the scale, the researchers applied the instrument to a pilot sample of (30) male and female students from outside the current study sample. The reliability coefficient was calculated using the internal consistency method using the Cronbach's alpha equation, and the split-half reliability coefficient was calculated using the Spearman-Brown equation. The overall reliability coefficient for the Linguistic Intelligence Scale, extracted using the internal consistency

method using the Cronbach's alpha equation, was (0.82), and the split-half reliability coefficient for the Linguistic Intelligence Scale was (0.81). These values are appropriate and indicate the reliability of the scale.

Second: The Creative Self-Efficacy Scale

The scale was originally developed by Karwowski et al. (2018). It consists of (6) items. Each item contains one sentence, and the respondent must respond by indicating the extent to which it applies to them.

The scale has acceptable psychometric indicators, with the internal consistency coefficient (Cronbach's alpha) calculated at (0.790). The test-retest reliability value was (0.80).

Validity and reliability procedures for the current study: The researchers translated the inventory from English into Turkish, and the translation was reviewed by three English language experts to ensure its accuracy. A reverse translation of the inventory, from Turkish to English, was also conducted by another English language expert to ensure that each item retained its original meaning in the scale. Minor modifications were made to the Turkish text of some items in light of these procedures. The new version of the scale was also presented to five specialists in educational psychology and measurement, who were asked to express their opinions on the extent to which each item fit the scale. The judges unanimously agreed that all items fit the scale.

To verify the construct validity of the creative self-efficacy scale in the current study, the researchers applied the scale to a survey sample consisting of (30) male and female students from outside the current study sample, and the correlation coefficient between the paragraphs and the total score of the scale was extracted, and the following table shows these results:

Table (2): Correlation coefficients of each item with the with the linguistic intelligence scale.

Item	The item's correlation coefficient with the scale
1	0.68**
2	0.78**
3	0.73**
4	0.74**
5	0.88**
6	0.78**

Table (2) shows that the correlation coefficients between the Creative Self-Efficacy Scale items and the total score ranged between (0.68 and 0.88), which are appropriate and statistically significant values, indicating the construct validity of the scale. To verify the scale's reliability, the researchers applied the instrument to a pilot sample of (30) male and female students from outside the current study sample. The resulting reliability coefficient was calculated using the internal consistency method using the Cronbach alpha equation, and the split-half reliability coefficient corrected by the Spearman-Brown equation was calculated. The overall reliability coefficient for the Creative Self-Efficacy Scale reached (0.85) and (0.78), which are appropriate values and indicate the scale's reliability.

Correction of Study Instruments

The two scales were corrected based on the scores given to each alternative, according to a five-point scale: strongly agree, given (5) points; agree, given (4) points; neutral, given (3) points; disagree, given (2) points; and strongly disagree, given (1) point.

Study Variables:

Independent variables: gender (male, female) and creative self-efficacy.

Dependent variable: linguistic intelligence.

Study Results and Discussion

This study aimed to reveal the predictive power of creative self-efficacy for linguistic intelligence among a sample of Bartın University students. This was achieved by answering the following questions:

Results related to the first question and their discussion: What is the level of creative self-efficacy among Bartın University students?

To answer this question, means, standard deviations, and levels of creative self-efficacy were extracted among Bartın University students. The following table shows these results:

Table (3): Means and standard deviations for the level of creative self-efficacy

Item	rank	M	SD	level of creative self-efficacy
6	1	4.19	0.88	high
4	2	4.15	0.91	high
2	3	4.01	0.92	high
5	4	3.98	0.82	high
1	5	3.90	0.99	high
3	6	3.73	1.18	high
Overall average		3.99	0.70	high

Table (3) shows that the overall mean of the level of creative self-efficacy among Bartın University students was (3.99) with a standard deviation of (0.70) and a high level, while the means of the paragraphs ranged between (3.73 and 4.19), where paragraph (6) which states (I am good at proposing original solutions to problems) came in first place with the highest mean (4.19) and a standard deviation (0.88) and a high level, while item (3) which states (My imagination and ingenuity distinguish me from my friends) came in last place with the lowest mean (3.73) and a standard deviation (1.18) and a high level.

The result can be explained by the university's high standards for student admission, which is reflected in the quality of students enrolled. These students have a strong foundation of abilities and past achievements, which leads them to form beliefs in their ability to succeed in subsequent tasks and develop a deeper insight into their personal past experiences in achieving future successes. Furthermore, the experience of creative mastery and observing the successes of others—that is, seeing models of similar abilities accomplishing tasks—works to improve students' self-efficacy

beliefs. It can also be argued that students' enrollment in university and passing high school, which is a barrier for many students to enroll in university, has an impact on their levels of creative self-efficacy. Together, these factors represent important sources of creative self-efficacy.

The university's teaching strategies, which rely on active learning, provide students with the opportunity to access knowledge, and adopt research and inquiry as educational methods, have created a sense of control among students over their surroundings and their ability to navigate diverse experiences. This has played a role in raising their level of creative self-efficacy. According to numerous studies, a significant correlation has been found between the use of strategies and an individual's belief in their ability to succeed. Additionally, there has been a significant correlation between students' choices of educational technologies and their sense of self-efficacy (Muhammad, 2022).

The item stating " I am good at proposing original solutions to problems " ranked first can be explained by the university's teaching strategies, which embrace active learning, giving students a greater role in the learning process, and moving away from traditional education, which relies on rote learning and indoctrination.

The last-ranking position of the item " My imagination and ingenuity distinguish me from my friends " may be due to students adopting mastery goals that focus on individual performance and progress in completing tasks, rather than adopting performance goals that rely on comparison with others and an attempt to appear superior and creative within the normative group to which the student belongs. Students with high levels of self-efficacy tend to invest a great deal of effort in achieving their goals (Suherman & Vidákovich, 2024).

Results related to the second question and their discussion: What is the level of linguistic intelligence among Barton University students?

To answer this question, the arithmetic means, standard deviations, and linguistic intelligence levels of Bartin University students were extracted. The following table shows these results:

Table (4): Means and standard deviations for the level of Linguistic intelligence

Item	rank	M	SD	level of Linguistic intelligence
4	1	4.64	0.65	high
19	2	4.51	0.83	high
6	3	4.30	0.83	high
14	4	4.21	0.91	high
15	5	4.12	1.05	high
2	6	4.05	0.94	high
17	7	4.03	0.80	high
13	8	4.00	0.97	high
1	9	3.96	1.02	high
5	10	3.87	1.00	high
7	11	3.72	0.89	high
11	12	3.62	1.25	medium
18	13	3.52	1.00	medium
12	14	3.45	1.23	medium
16	15	3.41	0.94	medium
3	16	3.30	1.19	medium
10	17	3.27	1.06	medium
8	18	3.06	1.18	medium

Item	rank	M	SD	level of Linguistic intelligence
9	19	2.74	1.16	medium
Overall average		3.78	0.51	high

Table (4) shows that the overall mean of the level of linguistic intelligence among Bartın University students was (3.78) with a standard deviation of (0.51) and a high level, while the means of the items ranged between (2.74 and 4.64), where item (4) which states (I listen carefully to others) came in first place with the highest arithmetic mean (4.64) and a standard deviation (0.65) and a high level, while item (8) which states (I find it difficult to tell stories) came in last place with the lowest mean (2.74) and a standard deviation (1.16) and an average level.

The high level of linguistic intelligence among students can be attributed to the nature of the university stage, which requires extensive interaction with colleagues and professors, in addition to constant conversation with friends directly or via social media. This result can also be explained by the extensive reading required of university students. These factors align with Gardner's view, which holds that intelligence is influenced by prevailing social and cultural factors (Armstrong, 2018).

As for the solutions of item (4), which states (listen carefully to others) in first place, it can be explained in the nature of the listening skill as a basic skill for mastering any language; listening as a language skill is the first source of linguistic inputs, as languages remain in essence a product of sounds coming to the human ear.

As for the solutions of item (19), which states (I possess the basics necessary to compose and write novels) in last place, this is due primarily to the fact that writing, in its essence, represents a creative and innovative product that requires refinement, training and practice, and without these factors, not all students will be able to achieve this creative product. Creativity, as a material or moral product, represents a skill like any other skill that requires training.

Results related to the third question and their discussion: Are there statistically significant differences at the significance level ($\alpha=0.05$) in creative self-efficacy and linguistic intelligence among Bartın University students attributable to the gender variable?

To answer this question, the means, standard deviations, and independent samples t-test were extracted for the level of creative self-efficacy and linguistic intelligence among Bartın University students according to the gender variable. The following table shows these means:

Table (5): means, standard deviations, and t-test for independent samples for the level of creative self-efficacy and linguistic intelligence among students according to the gender variable.

variables	Sex	number	M	SD	T-value	df	Significance level
Creative self-efficacy	male	65	3.91	0.72	-1.774	95	.079
	female	32	4.17	0.64			
Linguistic intelligence	male	65	3.82	0.52	1.172	95	.244
	female	32	3.69	0.50			

Table (5) shows that the “t” value for the level of creative self-efficacy among Bartın University students according to the gender variable reached (-1.774), and the “t” value for the level

of linguistic intelligence among Bartın University students according to the gender variable reached (1.172), which are statistically insignificant values at the significance level of 0.05, meaning that there are no statistically significant differences in the level of creative self-efficacy and linguistic intelligence among Bartın University students attributable to the gender variable.

The lack of a difference in linguistic intelligence between males and females can be explained by the developmental characteristics of the students. Both males and females are at the same developmental stage and are exposed to the same linguistic stimuli. Furthermore, all educational settings for both males and females are similar. Furthermore, the traditional view held by social circles that females are superior to males in language is no longer valid in light of recent studies.

The lack of a difference in creative self-efficacy between males and females can be explained by the way family and cultural upbringing is conducted in Turkish society, which seeks to promote gender equality and non-discrimination in treatment, encourages goal achievement, and provides the necessary reinforcement when completing various academic tasks and challenges. The university also seeks to attract a large number of faculty members from diverse countries and cultures with advanced academic qualifications and international competencies. They, in turn, value creative achievements and unconventional solutions to problems from both genders without discrimination. This has been reflected in the quality of creative self-efficacy among students of both genders. This study is consistent with studies by Mujion (2023) and Mahasneh (2013).

Results and discussion related to the fourth question: What is the predictive power of creative self-efficacy in linguistic intelligence among Bartın University students?

To answer this question and extract the predictive power of creative self-efficacy in linguistic intelligence among Bartın University students, a linear regression analysis was conducted. The following table shows these results:

Model	Standardized Coefficients	t	Sig.	R	R square	B	F	Sig.
	Beta							
(Constant)	2.420	9.039	0.000	0.467	0.218		26.502	0.000*
creative self-efficacy	0.467	5.148	0.000*			0.467		

Table (6) shows the regression coefficients that showed that the variable of creative self-efficacy in linguistic intelligence among Bartın University students was statistically significant at the significance level (0.05), as the value of "F" was (26.502), which is a statistically significant value. The table shows that the values of the standardized regression coefficients were positive and statistically significant on the variable of creative self-efficacy in linguistic intelligence ($\beta = 0.467$; $t = 5.148$; $p = 0.000$). The overall correlation coefficient R^2 between the variable (creative self-efficacy) and (linguistic intelligence) among Bartın University students was (0.218), which means that 21.8% of the variance in linguistic intelligence among Bartın University students is explained by the variable of creative self-efficacy. That is, creative self-efficacy predicts (21.8%) of linguistic intelligence at Bartın University.

The result can be explained in light of the cultural and social influences that can affect linguistic intelligence, according to Bandura's perspective. Creative self-efficacy is essentially socially sourced. Individuals with high creative self-efficacy believe they can cope effectively with events, expect success in overcoming obstacles, and believe that perseverance in tasks leads to a high level of achievement. These individuals have greater confidence in their ability to perform tasks and view difficulties as challenges rather than threats. They actively seek out new situations, are less afraid of failure, have high ambitions, and possess the ability to think analytically and solve problems. This also applies to enhancing linguistic intelligence. Students' belief that they possess creative self-efficacy will motivate them to improve their linguistic intelligence and engage in sociolinguistic contexts that enable them to strengthen their language and express themselves without fear of making mistakes or being criticized.

This finding can also be explained by the fact that students with high levels of creative self-efficacy invest effort in achieving their goals and actively seek solutions from multiple perspectives, while, conversely, those with low levels of creative self-efficacy tend to lack self-confidence. In this regard, creative self-efficacy emerges as a pivotal factor that motivates students to take action and develop innovative ideas. The current study is consistent with studies by (Ghasemi 2004; Ahmadian and Muhammad, 2022; Wang and Sun, 2020; and Nafisa and Putro, 2024).

Recommendations

- Conduct studies using path analysis to investigate the direct and indirect relationships between creative self-efficacy and linguistic intelligence by introducing mediating variables and linking them to various aspects such as academic engagement and personality traits.
- Hold training workshops for students to explain the impact of their creative self-beliefs on their linguistic intelligence.
- Raise awareness among university professors and academic advisors about the need to enhance creative self-efficacy and expose them to situations of success and avoid situations of failure, as factors that can contribute to enhancing linguistic intelligence.
- Conduct studies consisting of a research team in psychology and linguistics across different cultures and languages.

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