How to Cite:
Hameed, Y. A. K., & Al-Bakri, S. A. B. (2022). The correlation between Iraqi EFL preparatory school students' strategic thinking and writing performance. *International Journal of Health Sciences*, *6*(S6), 8307–8322.
https://doi.org/10.53730/ijhs.v6nS6.12065

The correlation between Iraqi EFL preparatory school students' strategic thinking and writing performance

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Abstract---For many years, the importance of strategic thinking as a substantial contributor to educational success has been the focus of L2 learning research. Intrapersonal and interpersonal skills and learning strategies are still as important as individual differences in language learning. Writing is one of the productive skills that students should develop in the early stages of English language learning. Developing this creative skill will help students to learn other language essential skills such as reading, speaking, and listening. The aim of the current study is twofold: firstly, finding out Iraqi EFL preparatory school students' strategic thinking and writing performance. Secondly, identifying the correlation between Iraqi EFL preparatory school students' strategic thinking and writing performance. In view of that, this study is correlational research in which the sample consists of (377) students from different Iraqi EFL preparatory schools during the academic year 2021/2022. Two instruments are used to achieve the aims of this study: John Pisapia's (2014) questionnaire has been adopted to find out students' strategic thinking and an emotive writing test is developed to assess students' writing performance. After ensuring the psychometric features, the three instruments are applied to the research sample. The findings reveal that students have a good level of strategic thinking and a moderate level of writing performance. Furthermore. The findings also indicate that the participants' strategic thinking is statistically

Manuscript submitted: 9 April 2022, Manuscript revised: 18 June 2022, Accepted for publication: 27 July 2022

correlated with their writing performance. In addition, Iraqi EFL preparatory school students' ST contribute positively in explaining the variation in WP.

Keywords---strategic thinking (ST), writing performance (WP).

Introduction

According to Richards et al. (1992, p. 269), WP is "a person's actual use of linguistics". Brown (2000, p. 30) refers to language performance as "the overtly observable and concrete manifestation or realization of competence. It is the actual doing of something. Regarding WP, he refers to as the actual production of linguistic events that provides students with the opportunity to learn all the rules of their language and how they can better organize their ideas more coherently using the language. ST, as described by Pisapia (2014), means being able to develop a strategy or plan to realize a particular vision. Every decision is framed in terms of how it helps to accomplishing that vision. It involves examining prospective answers based on a set of assumptions, articulating potential alternative solutions, and challenging existing assumptions and alternatives, potentially leading to new, more appropriate solutions. Pisapia's definition has been adopted as an operational one.

(Bonn, 2001, p. 64) asserts that there is a relation between school students' ST and their WP without specifying the writing methods they are regulated by. This study will emphasize the importance of encouraging students to think strategically in order to enhance their understanding of its function for improving WP. It will also see if there is a relation between ST (a cognitive process that allows a student to access prior material, monitor comprehension, correct misunderstandings, synthesize and conclude information, and so on) and WP. This research provides insights for teachers to promote EFL students' ST to better develop their WP. However, the problem of the current study is best expressed through answering the following research question:

Is there a relationship between EFL preparatory school students' strategic thinking and their writing performance?

Since one of the educational purposes is to equip learners with strategies to cope with stressful and challenging situations that they might face in the learning process. ST is assumed effective promoting EFL students' WP. As the correlation between EFL preparatory school students' ST and WP has not been fully investigated yet in the Iraqi EFL context.

Literature Review

Strategic Thinking (ST)

Thinking, as mentioned by Maxwell (2003, p. 138), is "the mental process which beings by constructing thoughtful associations and representations of the world". A thought can be an idea, an image, or a sound, or it can even be used to regulate

an emotional state. ST is the ability to devise strategies and conjure up ideas that will allow students changing settings, taking into account the numerous problems that lie ahead (Liedtka, 1998). As mentioned by Kaufman (1995, P. 116), ST is “an intellectual methodology that organizes management processes and events in order to attain corporate goals and objectives”. Being able to construct a strategy or plan to realize a specific vision is what ST entails.

Additionally, Day (1994) states that ST is a cognitive process that allows a learner to access prior information, monitor comprehension, correct misunderstandings, synthesize and extrapolate information, and ask pertinent clarifying questions. strategic thinking is explained by Bonn (2005) as a long-lasting process and its purpose is to resolve vagueness and indicate a complicated environment. According to Liedtka (1998, p. 40), ST is “the basis for creating new strategies to change competition rules as well as offering different prospects”. As shown by Day (1994, p. 130), ST as “a cognitive process that allows a learner to access prior information, monitor comprehension, correct misunderstandings, synthesize and extrapolate information, and ask pertinent clarifying questions”. Mohammad (2002) explains ST as the practice of familiarizing decisions with the end in mind and work backward to ensure alignment of action to the ultimate goal. It is a discipline of assessing alternatives and adjusting decision-making to the ultimate goal rather than relying on a more limited and unobserved problem solving approach. He points out a set of important reasons to learn ST:

- To help the learner to go to the fields and to compete effectively.
- To teach the student good required thinking skills that are very vital in all fields of study.
- To teach general social benefits require a learner who can look deeply and control to the problems related to his/her educational institution.
- To achieve psychological comfort that effectively contribute to adapt events and variables that surround the educational field.

ST, according to a lot of strategy theorists and practitioners, may be learnt as a skill and developed into a habit (Hanford, 1995 & Liedtka, 1998). Daily training forms the habit of accepting this sort of learning as a mental simulation. Individual thinking is transformed into practice through ST, which is the logical extension of individual thought. In one of the early studies on ST, Ohmae, (2001) asserts that ST is the grouping of analytical method and mental resistance in order to obtain a competitive benefit. A good insightful analysis works as a stimulus for the strategic mind to work productively. It takes a strategic and inquisitive mind to come up with the true questions and phrase them as solution-oriented challenges in order to perform a good analysis.

Abilities Involved in Strategic Thinking

Heracleous (1998) states that it is difficult to define, measure, train, or learn how to think strategically since describing the cognitive nature of ST is challenging. Therefore, each learner is supposed to have ST abilities since thinking is such a natural characteristic of everyday life. ST, as stated by Torset (2001), gives a sight for recognizing a vision and attaining "perpetual invigoration". This view has two ideas: the first idea collects two contrasting viewpoints on ST. It is all about

creating an encouraging environment for the generation of ideas, motivation, innovations, and vision. The second viewpoint is a methodical approach to supporting such an atmosphere for a longer period by engaging devices and procedures rather than merely creative desire. Therefore, ST is considered as a managerial/mental activity whose purpose is to find innovative, imaginative ways that can rewrite the rules of the competitive process and predict considerably different expectations from the present" (Heracleous, 1998). Bonn (2001) suggests three major characteristics that are needed to be present when ST g occurs:

- A holistic understanding of the organization and its environment, recognizing the linkages and complexity of the various sub-structures and relationships.
- Creativity “thinking out of the box”, for new ideas and frequent reworking of old ideas and practices.
- A vision for the future of the organization.
- Liedtka (1998), while recognizing the importance of the attributes explored by Bonn, suggests that ST:
  - Embodies a focus on intent rather than trying to bring resources and opportunity together.
  - Involves time thinking, in that looking to the future necessitates taking into account the past and present, as they are all interconnected.
  - Bridges the gap between analytical and intuitive thinking. This shows that strategic thinkers are "experimental" thinkers, capable of imagining and critically evaluating multiple potential courses of action.

Importance of Strategic Thinking

ST mergers a rational and convergent approach with creative and divergent methods to solve strategic problems (Bonn, 2005). Thinking strategically, enables individuals make sense of disorder and to connect the forces that surround them to their benefit rather than allowing them to crush us (Sloan, 2006). Strategic thinkers base their decisions on a mental model of the complete system. This strategic conviction takes into account the organization's external and internal contexts (Pisapia, 2009). Wong (1993) denotes that ST does not only keeps the strategy relevant, but it also examines its implementation objectively. Accomplishments are set up to track progress and see if the organization is heading in the right direction. If this is not the case, new tactics to improve performance and gain a competitive edge are established. Besides, Liedtka (1998) claims that individuals can use ST to help them prioritize effectively, make reasonable solutions, and organize limited resources wisely. As a result, the individual's performance will be high, effective and successful.

As claimed by Wong (1993), ST is highly important in creating a strategy that is unifying, rational and involves integrative framework for decisions related to resource utilization and direction of a problem. Moreover, Pisapia (2014) clarifies that ST serves as proactive and helps in defining competitive domain for corporate strategic advantage. It uses external and internal data and a qualitative synthesis of perceptions and opinions. Therefore, Heracleous (1998) approves that the goal of ST is to out – think, out – plan and out – maneuver other forces or competitors.

Without comprehensive ST, individuals risk making quick decisions that lack the creativity and insights derived through a ST process.

Strategic Thinking Process

ST entails two separate cognitive processes: planning and thinking. Planning is concerned with analysis, which involves building and formalizing processes and procedures, whereas thinking is concerned with synthesis, which involves promoting intuitive, original, and creative thinking at all levels of the company (Mintzberg, 1994). According to Drejer et al. (2005, p. 71), "Thinking about various scenarios and strategies in a creative manner is largely free of existing boundaries", ST, as illustrated by Bonn (2005, p. 337), is "a means of tackling strategic challenges that combines a rational and convergent approach with creative and divergent thought processes." The process orientation, according to Bonn, is concerned with how strategic thinkers comprehend and act strategically in a highly complex, ambiguous, and competitive environment. Thus, ST is concerned with new ways of thinking in order to compete in an uncertain and competitive environment. Accordingly, it appears that strategy unfolds through time rather than being planned.

While, traditionally, "strategy is about developing long-term defensible positions or stainable competitive advantage", Eisenhardt and Brown (2007, p. 438) suggest that today's strategy should be "constantly moving and evolving in ways that surprise and baffle the competition". Strategic thinkers must perceive the organization as a complex system influenced by both internal and external forces in order to develop/maintain a competitive edge. Goldman (2005) offers six successive steps involved in strategic thinking process:

- Know where you are beginning and where you want to end up.
- Explore various routes.
- Determine the best route.
- Plan the resources and means you will need.
- Examine your map objectively; and
- Harness your passion and commitment and set out on your path.

Strategic Thinking Patterns

As mentioned by Mohammed (2002), there are different patterns of ST that can be summarized as:

- **Synthetic thinking:** This way of thinking is made up of all the approaches that can be combined to create a new and original concept, as well as the formation of distinct stimuli that can be combined to create a new thinkable topic. This pattern is centered on constructing concepts and connecting them to mental abilities such as foresight, intuition, and scientific imagination.
- **Ideal thinking**: It is the most difficult characteristic of ST It is a way of thinking that is based on factual knowledge of reality and depends on awareness, sense, or reason to create abstract understandings of things and

relationships, thinking by default through symbols and circulars, and the ability to confirm assumptions.

- **Practical thinking**: This way of thinking is founded on pure logic and the learner's ability to highlight genuine data and facts in practice to reveal a point of view or strengthen a certain behavior.
- **Realistic thinking**: This pattern focuses on the creation of strategies that work within the constraints of available resources. It is divided into two types: the objective way, which is associated to the capability of available resources, and the self-related or personal way, which is connected to the method being used but may not be suitable for the maximum abilities of the resources available.

Characteristics of Strategic Thinking

ST involves a number of characteristics that are referred by authors. As mentioned by Bonn (2001), strategic thinking includes the following characteristics: System, Thinking, Creativity, Visionary thinking, Political, Sensitivity, Direction, Thinking in time, Intent, Focused Intelligent, Opportunism, Intuition, Tolerance of risk, Problem-solving, Reason endways- means, Analytical thinking, Hypothesis ability driven, Conceptual, Theorize abstractly, Synthesis, Command and control and Implementation. By adopting these characteristics of ST, individuals will be better able to overcome challenges/difficulties and stay factual to their scope's goals. While Bonn (2001) identify the characteristics of ST in terms of four cognitive qualities. These are:

- **Visionary thinking**: Genuine vision is a sense of direction that serves as the focal point for all of the organization's efforts. It even goes beyond that, as a thorough comprehension of an organization can help create a sense of shared identity. In order to produce future value, ST must be intent-focused and express a feeling of direction, discovery, and destiny (Young, 2016).
- **Creative Thinking**: Creativity has a lot of attention, and it has got so complicated that it is hard to assess. The field as a whole has fundamental issues, such as a lack of definition and restricted educational applicability. As a result, most measures and methods used to evaluate creative processes, products, and individuals have become obsolete. In competitive situations, particularly in the educational sphere, creative thinking generates novel and helpful ideas (Bonn, 2005).
- **System Thinking**: The application of system thinking is not confined to a single field. It is generally connected with the discipline of systems engineering, and it is more commonly utilized in strategic planning than ST. Because of its analytical nature, using systems theory in strategic planning is a logical step (Young, 2016). The linkage of holistic thinking reinforces the usage of systems theory in strategic thinking. Originally, it was thought that the easiest way to understand a system was to start with the parts and work your way up (Bonn, 2005).
- **Intuition**: Heracleous (1998) describes intuition as the ability to understand something instinctively, without the need for conscious reasoning. It appears to lack a comprehensive, dominant framework, which may be symptomatic of the ambiguity of ST. There are at least three different kinds of intuition:

- Holistic intuition: is a qualitatively non-analytical process that involves combining several, disparate informational impulses into a whole that may or may not be obvious.
- Inferential intuition: refers to automated analysis-based decisions. With practice, once-analytical inferences and conclusions have become automatic. Expert judgment is a term used to describe this type of intuition.
- Affective intuition: Where, regardless of any overt or intellectual backing, judgments are based mostly on emotional reactions to choice situations. This form of intuition is commonly referred to as 'gut-feel' (Bonn, 2001).

Components of Strategic Thinking
Conceptual Thinking

Conceptual thinking is the ability to recognize models and assess essential concerns in order to comprehend a situation or problem. Furthermore, within a conceptual framework, conceptual thinking combines integrated difficulties and elements. The widespread application of experiences, creativity, deductive reasoning, and intuitive processes to uncover prospective answers and feasible possibilities is referred to as conceptual thinking (Goldman, 2005, 2010).

Systematic Approach

A systematic approach is a social method that use systematic theories to produce desired results or distinguished transformations. Such a mode of thinking has a unique approach to solve problems in which definite concerns are viewed as components of larger systems. The systematic approach offers that systems can be characterized holistically (Ja'faryani, 2011). A strategic thinker, according to Liedtka (1998), must first create a mental model in his or her head and then comprehensively comprehend the associations between its constituents. Although there are many actions among its components, the strategy process is a holistic and integrated approach.

Opportunism

Learners must continually embrace new concepts in strategic thinking. This procedure can create strategic possibilities as well as provide access to actual strategies. The fundamental basis of strategic thinking is the discovery and utilization of opportunities. This concept's nature is to employ new experiences in order to apply strategic possibilities in their educational environment (Goldman, 2005).

Foresight

Three Ps and one W can be used to summarize foresight. The three Ps represents Possible, Probable, and Preferable future events, while W stands for Wild Card. Characters, in addition to W, are other events that have lesser odds but may occur. Mahdavian et al. (2014) claims that the core of foresight is the management of a risky condition. Foresight is not the process of making predictions or expecting specific events, but rather a systematic process of

making plans in order to set accurate expectations and discover probabilities for learners to take exceptional measures to attain desired conclusions (Ja'faryani, 2011).

Cognition

Cognition, according to Goldman (2005), is a process that includes understanding, logic, and intuition. There is a diversity of approaches of achieving cognition. One of them is to distinguish between the activity of the right and left hemispheres.

Performance

The term "performance" refers to a person's capability to carry out the tasks given to them by an organization. In recent years, performance has been used to describe how a learner carries out his or her responsibilities. "Performance" is sometimes misunderstood as "attempt", while it should be judged based on the results of actions (Byars & Rue, 2008).

Occupational Performance

Employees' ability to come across their occupational standards is limited by their performance (Hanford, 1995). Occupational performance refers to the quality and quantity of duties done by an individual or group. As stated by Heracleous, L. (1998), occupational performance is the usage set-up, and it must be advantageous to the organization's aims that can be influenced by common interactions include attempt, individual's abilities and perceptions of role.

Occupational Performance

Occupational performance is the usage set-up, and it must be advantageous to the occupation's aims. Individuals' ability to come across their occupational standards is limited by their performance (Bonn, 2005). Occupational performance, in a more formal meaning, refers to the quality and quantity of duties done by an individual or group. According to Byars and Rue (2008), people's performance can be influenced by common interactions in the following ways:

- Attempt: a person to carry out their obligations expends originating from excitement and describing how much energy (either physical or mental).
- Ability: Personal behaviors that a person uses to carry out specific jobs.
- Perceptions of Role: referring to the regimented steps people take to reach their professional objectives (Byars & Rue, 2008).

Municipality

A municipality is a geographical area where a city council has political authority to provide local and state services to the public. Services include sewage system maintenance, criminal prevention, and firefighting (O'sullivan, 2007). According to one definition, a municipality is a public, non-governmental, and independent

enterprise that is legally constituted in cities and is responsible for local issues as well as providing services to citizens.

Developing Strategic Thinking

According to Mintzberg (1998), developing ST appears to be explored if the cognitive qualities of strategic thinkers are understood. Of course, this is predicated on the assumption that these traits can be quantified. The four cognitive qualities of a strategic thinker, fortunately, appear to be quantifiable. Other existing and successful characteristic measures could be accessed and synthesized into a single evaluation using the four cognitive qualities (visionary thinking, intuition, creative thinking, and system thinking) as a guide. Bonn (2005) explores that in contrast to the micro focus that many people have; developing ST requires thinking about larger, macro issues. ST entails thinking long-term rather than short-term. A shift in mindset is required to become strategic. Individuals should ask themselves hard questions that make them think strategically instead of focusing solely on operational, strategic, and interpersonal issues (Jelenc & Swiercz, 2011). Bonn (2001) notifies that, to help individuals understand with high ST skills, some skills are put for helping individuals become strategic. These are as follows:

- Communicate Powerfully: Listening, gathering, and, most importantly, sharing information are all part of this process. Individuals that were rated best on strategic perspective incorporated strategy into practically every interaction to correlate what they were doing to what need to accomplish.
- Foster Innovation: The world around us is changing. Disruption is all around us. Individuals should encourage new ideas that are beneficial and acceptable to their fields.
- Inspire and Motivate: Others must believe in and implement a strategy if it is to be more than words and assumptions. The ability to inspire and encourage others is very significant to the success of any strategy.
- Establish Stretch Goals: Stretch goals assist in improvement and implementation of a strategy. Individuals' engagement rises and their self-confidence rises as they achieve stretch goals. Therefore, they progress one-step closer to their goals of success.

Modeling Strategic Thinking

The interconnection of ideas and a willingness to consider new alternatives are common elements in ST. Liedtka (1998) presents a ST model of interrelated behaviors. This model includes five key phases. These are:

- Systems Perspective: ST demonstrates a systems or holistic viewpoint that acknowledges the interdependence of the many organizational components.
- Intent-focused: The ongoing shaping and reshaping of intent is what motivates ST and gives it a sense of direction.
- Thinking in Time: The gap between the present reality and the intended future is what drives ST, not just the future.
- Hypothesis Driven: ST activities revolve around developing and testing hypotheses. It poses the hypothetical inquiry "What if?" before posing the

probing query. “If … then?”
- Intelligent Opportunism: To take advantage of alternate tactics that can arise in a rapidly changing environment, ST requires the capacity to be cognitively opportunistic, or open to new experiences.

Students' Writing Performance (WP)

As mentioned by Brown (2015, p. 438), WP is "the way language is actually put together". The act or process of accomplishing writing activities is also known as WP (Wehmeier, 2001). Moreover, Abu Jalil (2001, p. 107) defines WP as "what students really accomplish when given writing assignments".

Kinds of Classroom Writing Performance

According to Brown (2015), there are five main types of WP. These include:

Imitative or Mechanical Writing

for acquiring the principles of the orthographic code, students will "write down" English letters, words, and brief sentences at the initial level of learning to write. At this time, a variety of classroom techniques is widely used.

- Recognition Techniques: Identification of letter features is a common problem for beginner readers, and the same basic ability applies to writers. Discover the various letter; letter and word matching; circle anything you can find; and capital and lowercase letter matching.
- Copying: Learning to write by hand is a psychomotor and kinesthetic as well as a cognitive task. Even if students can perceive letter distinctions, they could struggle to produce them, thus copying is an old-fashioned yet effective activity in tiny doses. Handwriting, according to some, is becoming a lost art because of the rise of digital-keyboarding technologies. Handwriting will undoubtedly continue to be a popular method of writing for decades to come.
- Sound-Spelling Practice: Phoneme-to-grapheme correspondence is a fundamental writing ability that applies to all alphabetic writing systems. A new system could be problematic for learners whose first language is nonalphabetic (Chinese, Japanese, etc.), but early research on cross-linguistic effect revealed that "little" L1–L2 variations could cause as much difficulty as major dissimilarities. As a result, a Spanish L1 speaker may encounter greater difficulties with English as a second language than one might think.
- Dictation: is a good way to practice sound–spelling correspondences while also strengthening grammar and discourse elements. Dictations usually consist of the teacher reading (aloud) a brief paragraph, rereading it in segments, pausing for pupils to write down what they hear, reading it a third time, and then assessing their responses for accuracy.

Intensive or Controlled Writing

For learning, reinforcing, or testing grammatical principles, writing is sometimes employed as a production modality. This type of focused writing is most commonly seen in written grammar drills. This sort of writing does not permit for much, if any, innovation on the writer's part. Presenting students with a paragraph in which they must alter a specific structure throughout is a typical kind of controlled writing. As an example, they may be asked to change all present tense verbs to past tense; in this case, other temporal references in the text may need to be changed as well. Guided writing reduces the teacher's control while yet providing a variety of stimuli. For example, a teacher might ask students a sequence of questions to urge them to tell a narrative they just saw on videotape: What is the setting of the story? Give a description of the main character. What does he have to say to the woman in the car? A dictocomp is yet another type of controlled writing. A paragraph is read at normal speed two or three times, and then students are asked to rephrase the paragraph using their best recollection of the reading. In one of numerous forms of the dictocomp technique, after reading the text, the teacher writes significant words from the paragraph on the chalkboard in order as signals for the students.

Self-writing

Self-writing, or writing with only the self in mind as an audience, may account for a considerable amount of classroom writing. The most visible example of this category in the classroom is note taking, which involves students taking notes during a lecture for subsequent recall. Other places to take notes include the margins of books, digital notes and highlights, portfolio entries, and plain notepaper kept for later access. Writing in a diary or a journal also comes within this category. While theoretically written for oneself, a conversation journal—in which a student records ideas, feelings, and reactions and which a teacher reads and reacts to, has two audiences in many situations.

Display Writing

Writing is a way of life in the school curriculum framework, as previously said. Short answer questions, essay exams, and even research projects will all have a display component for all language students. One of the academic skills that academically bound ESL students must master is a variety of display writing strategies.

Real Writing

While display writing is present in almost every classroom writing assignment, some classroom writing focuses on the true conveyance of messages to an audience in need of those messages. The two categories of real and display writing are actually two ends of a continuum, with a mixture of display and real writing in the middle. The following three subcategories show how reality can be injected:

- Academic: group problem-solving tasks, particularly those involving particular disciplinary themes as well as personally relevant subjects, may

include a writing component in which information is actively sought and communicated. Peer-editing work expands what would otherwise be a one-person audience (the instructor) and allows for genuine writing time. Many academic courses allow students to share fresh material (that they have written about) and/or present conclusions from written work to the rest of the class, bringing the reality of an audience into the classroom.

- Vocational/Technical: In classrooms of students learning an FL for personal advancement, a wide range of real writing can occur. Real letters can be written, real instructions for a particular operation or assembly can be given, and real forms can be completed. In business language training, where an FL is offered within enterprises and corporations, these opportunities are considerably higher.
- Personal: Diaries, letters, post cards, notes, personal messages, and other informal writing can be done in almost any FL lesson, especially in an interactive classroom. While certain jobs may be a little improvised, meaningful information exchange can take place.

Method

Population and Sampling

A Population refers to any collection of an identified group of human beings or non-human entities such as objects, institutions, time, units, etc. (Mills and Gay, 2019). The population of current study is Iraqi EFL preparatory school students 5th. grade at Karbala' governorate during the academic year 2021 / 2022. A sample is a group of individuals, items, or events representing the larger group's characteristics from which the sample is drawn (Mills and Gay, 2019). The study sample is (377) Iraqi EFL 5th. preparatory school students at Karbala' governorate are randomly selected.

Description of The Study Instruments

To achieve the aims of the current study, two instruments have been used. They are; STQ and WPT.

Strategic Thinking Questionnaire (STQ)

To find out students' ST, John Pisapia's (2014) questionnaire has been adopted. This questionnaire consists of (33) items. Each item in the questionnaire is answered on a four point Likert scale ranging from always (3 scores) to never (0 score). The highest score a student could get is (69), while the lowest score is (0).

Writing Performance Test (WPT)

To measure EFL preparatory school students' WP, an emotive writing test is used. According to Celce – Murcia et al. (2014), an emotive writing test is concerned with personal writing, such as writing letters or emails to friends describing personal experiences. Accordingly, the students are asked to write a film they saw recently. The scoring scheme of WPT consists of five components: organization, content, grammar, punctuation and spelling, and style and quality of expression.

These components are leveled from five to one. Thus, the highest score a student can get is (25) while the lowest score is (5).

Validity and Reliability

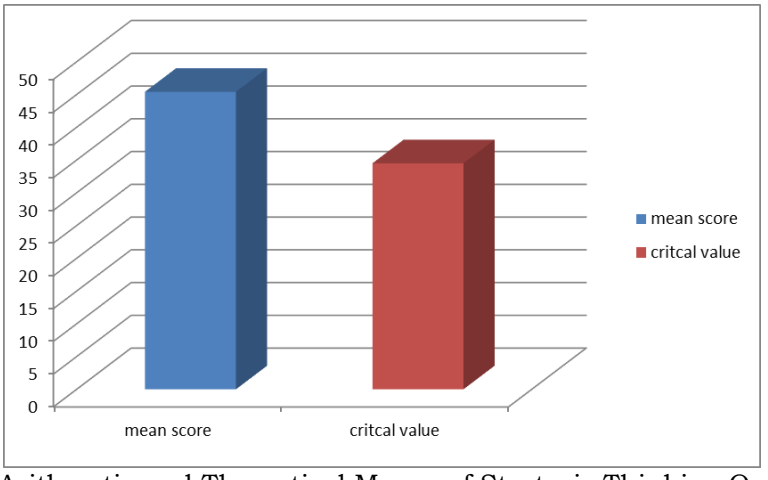
The instruments have been exposed to a jury of thirteen university instructors who are experts in the fields of ELT and linguistics. The jurors are asked to decide the face validity of the study instruments and to decide the suitability of the scoring schemes used in scoring the writing. Reliability of STQ is estimated by using Test/retest method and Cronbach Alpha. While the reliability of WPT is found by using Cronbach Alpha, which indicates that, all the reliability coefficients are acceptable. The experts agree on the scoring scheme, the whole instruments' and their items, except for some linguistic modifications that have been taken into consideration.

Results

To achieve the first aim of this study, the two instruments (STQ and WPT) are applied to the study sample. The arithmetic means and standard deviations have been computed, and t-test for one independent sample has been employed to determine the significant differences between the arithmetic and theoretical means. The results are shown in Table (1.1) and Graphic (1):

Table 1.1
Arithmetic Mean, Standard Deviation, and T- Test Values of strategic thinking scale and writing performance test

Variable	Sample	Arithmetic Mean	SD.	Theoretical Mean	t-Value		Significance 0.05
					Computed	Critical	
Strategic thinking	377	45,411	7,328	34,5	28,912	1,96	Significant
writing performance	377	15,186	4,281	15	0,842	1,96	Not significant



Graphic 1. Arithmetic and Theoretical Means of Strategic Thinking Questionnaire

As shown in Table (1.1), the significance of the difference between the arithmetic Mean and the theoretical Mean is identified. Regarding ST, it is found that the difference is statistically significant because the computed T-value is found to be (28,912), which is greater than the critical T-value (1.96) at the level of significance (0.05) with a degree of freedom (375). This means that the study sample has a good level of ST. Concerning WP, the difference is statistically not significant. The computed T-value is found to be (0,842), which is less than the critical T-value (1.96) at the level of significance (0.05) and a degree of freedom (375). This means that the study sample has a moderate level of WP. To achieve the second aim. Students' responses to STQ and WPT are analyzed using Pearson's coefficient, and the findings are as shown in Table (1.2):

Table 1.2
The Calculated Correlation Coefficient between Strategic Thinking and Writing Performance

Sample	The Calculated Correlation Coefficient	t-Values		Level of Significance (0.5)
		Computed	Critical	
377	0,332	6,775	1,96	Significant

Table (1.2) shows the correlation coefficient value between ST and WP is found to be (0,332). T-test is used to determine the significance of the correlation. As a result, the computed t- test value is found to be (6,775) which is greater than the critical value (1.96) at the level of significance (0.05) and the degree of freedom (375). Therefore, the correlation between ST and WP is positive and statistically significant. That is, the greater the level of ST in the study sample, the better their WP. Accordingly, the question, which is about whether there is a correlation between Iraqi EFL Preparatory School students' ST and WP, is answered.

Discussion of Results

In relation to this study, the findings reveal that Iraqi EFL preparatory school students have a good level of ST. This indicates that the students know well how to think, plan, realize, synthesize, extrapolate and access information strategically. On the part of WP, it is found that the students have a moderate level of WP that is statistically significant. Moreover, according to the data computed from the study instruments, the students' ST is statistically correlated with their WP. In addition, Iraqi EFL preparatory school students' ST contribute positively in explaining the variation in WP.

Conclusions

In the light of the preceding results and discussions related to the aims of the study, it is concluded that Iraqi EFL preparatory school students have a good level of ST with a moderate level of WP. Additionally, the study findings reveal that the more the degree of ST is high among Iraqi EFL preparatory school students, the better their WP will be. Therefore, Iraqi EFL preparatory school students' ST is statistically correlated with their WP. Furthermore, the results obtained through

the study instruments show that the students' ST and WS contribute positively in explaining the variation in WP.

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