The Correlation between Iraqi EFL Preparatory School Students’ Cognitive Styles and English Productive Skills

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ABSTRACT (in English)

Cognitive styles are important in field of foreign language learning. Knowing of cognitive styles can be as guide to help teachers in order to determine students’ preferences that may used in learning process.

This study aims to find the Iraqi EFL preparatory school students’ cognitive styles. In addition, it aims to find the Iraqi EFL preparatory school students’ performance of productive skills. Moreover, the study aims to find the relationship between Iraqi EFL preparatory school students’ cognitive styles and performance of language productive skills. Where are your hypotheses?

The sample of the present study consists of 200 students from Iraqi different preparatory schools. To achieve the aims of the current study, two instruments have been used, namely; cognitive styles questionnaire and productive skills test. After ensuring the validity and reliability of the instruments, the two instruments are applied to the sample of the study.

The hypotheses are proposed to be tested throughout the current study:

1. There is a statistical significance which shows that Iraqi EFL students have cognitive learning styles
2. There is a statistical significance which shows that Iraqi EFL students have high level proficiency in productive skills
3. There is no statistical significance between Iraqi students’ cognitive styles and their proficiency in productive skills

The statistical manipulation of the results achieved revealed the following:

1. The study revealed that cognitive learning style to preparatory school students is "impulsive and reflective cognitive styles". Their success in productive skills increases when they use this style of learning. In other words, an individual who uses his preferred style of learning will become more efficient in productive skills.
2. The study also revealed that preparatory school students have an intermediate level of speaking skill while they have a high level of writing skill.
3. The study also found out a statistically significant correlation between cognitive learning styles and productive skills. In other words, an individual who uses his preferred style of learning will become more progress and succeed in productive skills.
ABSTRACT (in Arabic)

المستخلص

الأساليب الإدراكية مهمة في مجال تعلم اللغات الأجنبية. إن معرفة الأساليب المعرفية يمكن أن تكون بمثابة دليل لمساعدة المعلمين من أجل تحديد أفضل أنواع الطلاب التي قد تستخدم في عملية التعلم وتعزز أداء الطلاب بمختلف المهارات اللغوية.

تهدف هذه الدراسة إلى إيجاد:

1. الأساليب المعرفية لطلاب المدرسة الإعدادية العراقية.
2. أداء طلاب المدرسة الإعدادية العراقية للمهارات الإنتاجية.
3. العلاقة بين الأساليب المعرفية لطلاب المدارس الإعدادية العراقية وأداء المهارات الإنتاجية اللغوية.

وتتألف عينة هذه الدراسة من 200 طالب من مختلف المدارس الإعدادية العراقية. ولتحقيق أهداف الدراسة الحالية استُخدم الباحث أدواتين: استبيان الأساليب المعرفية واختبار المهارات الإنتاجية. وبعد ضمان صحة الأدوات وموثوقيتها، طبقت الأدوات على عينة الدراسة. حيث كشفت الدراسة الحالية النتائج التالية:

1. أن أساليب التعلم المعرفي الشائع لطلاب المدارس الإعدادية هو "أسلوب معرفي مندفع وتأمل".
2. وكشفت الدراسة أيضا أن طلاب المدارس الإعدادية يتمتعون بمستوى متوسط من المهارات في مهارة التكلم بينما يتمتعون بمستوى عال من المهارة في الكتابة.
3. وكشفت الدراسة أيضا إلى وجود ارتباط ذو دلالة إحصائية بين أساليب التعلم المعرفي والمهارات الإنتاجية.
INTRODUCTION

The Problem and Its Significance

The preferred technique of processing information is referred to as cognitive style. It explains how a person thinks, remembers, and solves problems. Cognitive psychologists view cognition to be a component of conscious perception, learning, and thinking. For each individual, there are many cognitive learning styles. We all learn and think in different ways. In education, understanding these parallels and differences is vital. While it is understood that students will interact and cope with curricular learning experiences in their own unique way, curriculum is frequently built on a shared knowledge of the learning processes. Addressing the instructional consequences for cognitive learning styles is one significant method. As a result, the investigation may provide some information for instructional designers and classroom teachers to use in order to increase meaningful and successful learning.

Cognitive styles also are chosen or persistent styles of brain function that are applied cognitive abilities that have developed in an individual or people (Oxford, Holloway and Horton-Murillo, 1992 :440). Cognitive styles are personality traits that affect how people perceive and make sense of the world. They form the basis for how a person collects and processes data. This means that in a classroom setting, if the curricula and teaching resources are designed in a way that is incompatible with a student's cognitive style, the student may struggle to assimilate information.

Affecting students' learning capacity as well as their perspectives about English and learning in general situations and contexts that required cognitive skills (Oxford et al., 1992:439). Brown (2000) suggests that cognitive style is a reasonably consistent attribute within an individuals that is linked to personality and may also have a cultural element.

Even though it is critical continue providing class activities that cater to a student's way of learning, it is also useful to enable students in exploring other learning styles, allowing them to be more flexible and successful in tasks and contexts where their favored style is not ideally predisposed. Once students have gained a sense of their own personal style that can be used it to tackle problems-solving and decisions-making in various situations

Knowledge of cognitive style is most important and crucial when it gives
good opportunities for better learning between teacher-student and student-student regarding the most important techniques for language learning. To minimize potential conflicts and improve classroom interactions and teacher-student connection, teachers need to understand their students’ cognitive style and how it is reflected in language learning. However, teachers try to 'overcome' their own style tendencies because of the students’ demands by proactively arranging for the incorporation of diverse styles within the “holistic-analytic and verbal-imagery” components. It has now been common in school environments for the same reasoning; how can pupils be required to prepare in the same way if they cannot all think of the same way? All students can be interested and involved in their learning when diverse cognitive styles are used in the classroom. It is critical that teachers comprehend how to incorporate student input. In order to establish a favorable educational environment, teachers should use cognitive styles of the students (Oxford et al., 1992:443).

It is vital to understand one's cognitive learning style in order to learn one's greatest capacity. The concept is used in a variety of areas, including education. Cognitive learning helps students increase their ability to think abstractly, which is useful in the classroom. Students that are aware of their cognitive learning style are able to thoroughly absorb the knowledge they have acquired rather simply memorize it. They have a better understanding of the reasoning behind complicated subjects and are more inclined to recall things in order to expand their knowledge (Oxford et al., 1992:444).

Furthermore, it has been observed that the majority of Iraqi students have difficulty speaking and writing due to apprehension, fear of making oral blunders, low speaking skill, a lack of peers or social circles with whom they may express their speaking and writing potentials, and, most crucially, the inability to structure discourse logically and cohesively. These difficulties and problems may lead to students’ weakness in productive skills that are considered interactive and required in any discussion (Murphy and Alexander: 2000: 3-14)

There is a crucial need to examine the relationship between cognitive learning styles and productive language skills (writing and speaking). The current study will find out whether cognitive learning styles have an impact on the language competence of productive skills. The problem of the current study will be to answer the following question: Do cognitive styles affect individuals’ success
in the language proficiency of productive language skills?

**Aims**

This study aims at finding:

1. Iraqi EFL preparatory school students’ cognitive styles.
2. Iraqi EFL preparatory school students’ performance of productive skills.
3. The relationship between Iraqi EFL preparatory school students’ cognitive styles and performance of language productive skills.

**Hypotheses**

The following hypotheses are proposed to be tested throughout the current study:

1. There is a statistical significance which shows that Iraqi EFL students have cognitive learning styles.
2. There is a statistical significance which shows that Iraqi EFL students have high level proficiency in productive skills.
3. There is no statistical significance between Iraqi students’ cognitive styles and their proficiency in productive skills.

**Limits**

This study is directed to:

1. The correlation between cognitive styles and productive skills.
2. The current study is directed to Iraqi preparatory school students in Karbala for academic year 2020-2021.

**Value**

The value of the current study comes firstly from the value of the cognitive styles among EFL students, and secondly from the value of productive skills as active skills in English language learning. The present study could be valuable to:

1. Raise teachers and students’ awareness of the importance of the cognitive styles in EFL classes.
2. Spark students’ interest with their cognitive styles.
3. Overcome some teachers’ inability to teach productive skills (speaking and writing) properly.
4. Overcome the ignorance of identifying of cognitive learning styles in English language teaching (ELT) classrooms.
5. Highlight the usefulness of cognitive learning styles in the field of ELT.

6. Help curriculum designers to take into account cognitive styles and productive skills to design appropriate aids, activities …etc. which support the needs of the appropriate teaching method according to country’s context.

**DEFINITIONS OF BASIC TERMS**

**Correlation**

Correlation aims to assess of how strongly two variables affect, and it alludes to a two or more variables. There are three possible outcomes from a correlational study: a positive correlation, a negative correlation, or no correlation. (McLeod, 2018:16).

There is a relationship between occurrences or things, or mathematical or statistical variables, that tend to vary, be related, or occur together in ways that are not predicted by chance alone (Merriam-Webster Dictionary).

The operational definition is a measure of the potential relationship between students’ cognitive styles and productive skills. The correlation could be positive, negative, or non-existent.

**Cognitive Style**

Tennant (1988) describes cognitive styles as "an individual’s characteristic and consistent approach to organizing and processing information" (p. 89)

Glass, and Douglas (1993) term cognitive styles as "a fairly fixed characteristic of an individual" (p. 268) and "are static and are relatively in-built features of the individual" (p. 268)

Humans' persistent and distinctive propensities for perceiving, storing, arranging, interpreting, reasoning, and problem solving are known as cognitive styles. (Kirton, 2003. 392).

Kirton’s definition is as operational one.

**Productive Skills**

Productive skills are those that need the performer to respond to a specific scenario (Fleming and Levie, 2003: 129).

Students must articulate words and write them to make a language, thus, they are also speaking and writing skills (Bashrin, 2013: 3).

Speaking and writing skills that require students to develop language themselves are referred to as productive skills (Harmer, 2007 :265).

The operational definition of Productive Skills is the language skills that need an
actual production from students and that are greatly affected by learners’ subjectivity in performance. These skills include speaking and writing.

THEORETICAL BACKGROUND

COGNITIVE STYLE

Cognitive styles, according to Chinien and Boutin (1993), are “information processing habits that characterize the learners' typical manner of perceiving, reasoning, problem solving, and remembering” (p. 303). ‘Skills through which learners govern their own internal systems of attention, remembering, retaining, and thinking,” according to Gagne (1985:55). Internal operations are replicated in such a way that students are able to develop a comprehensive approach to education (Riding & Rayner, 1998:35), and now they are consistent enough for students to keep the same behavior across period (Manning, in Wapner & Demick, 1991:78).

Teachers have wondered about how students remember over the years. Much research has concentrated on the domains of cognitive style in order to answer these concerns (Williamson & Watson, 2006:49.). Cognitive style has piqued the interest of many second language academics as a feature that may influence second language learning. Essentially, Hansen and Stansfield (1982) try to determine the relation between students' cognitive styles and success in a range of second language activities.

Allport in 1937 mentioned in Keefe, 1987) invented the term cognitive style to describe how different personality types affected the living conditions and adaptation. According to Messick (1976), cognitive style entails processing-data that represent the human’s typical manner of reasoning, solving – problem and decisions with understanding (p.7). Cognitive style, according to Hansen and Stansfield (1982), refers to differences across human beings in favorite methods of seeing, arranging, analyzing, or remembering knowledge and experience (p.263). For (Witkin et al., 2002), cognitive style means the “characteristic, self-consistent modes of functioning which individuals show in their perceptual and intellectual activities” (p.3). Cognitive styles are also defined as “characteristic modes of being that show up in perceptual or intellectual activity; they constitute stable, self-consistent forms of adaptation; and they form a link between the cognitive and personal/affective spheres” (Brodzinsky, 1982, cited by Paramo & Tinajero, 1990:1079). Individual disparities in students abilities in cognitive activities cannot be
attributed to differences in intellect, according to proponents of the notion. They contend that different approaches have similar worth or can be as effective in completing a task (Crozier, 1997).

There has been a huge amount of study done over the years to describe and explain a wide range of individual variances in cognitive style. Field sensitivity (field independence and dependence), analytic/global, reflective/impulsive, ambiguity tolerance/intolerance, and Kolb's experiential learning model, for example, are all cognitive styles recognized by Reid (1995). The field independence-dependence component has been the most thoroughly investigated and has the greatest promise for applicability to educational difficulties among these cognitive style classifications (Saracho, 1991; Swyter & Michael, 1982; Witkin, 1976; Witkin, et al.1962).

**Productive Skills**

Jaramillo and Medina (2011) define productive abilities, such as speaking and writing, as a key part of communication that is widely utilized to persuade others and share ideas and views. When learning a foreign language, a person is unwittingly exposed to both forms of linguistic ability. As previously stated, productive skills, also known as active skills, refer to the conveyance of information produced by a language user, whether it is spoken or written. Without the help of receptive skills, productive skills would not exist. Passive knowledge, such as listening and reading, serves as a springboard for active application of grammar structures, passive vocabulary lists, and foreign language sounds heard and repeated. This theoretical perspective is applicable to every language that is being studied. This should also demonstrate that the two sorts of talents are inextricably linked, and that neither can exist without the other. When learning a foreign language, it is common for receptive skills to come first, followed by the actual application of productive abilities. If one of these is missing from a learning process, the end result will be incomplete.

Speaking and writing are inextricably linked, as most regular users of any foreign language are aware. Grammatical structures, words and their right application, as well as a particular level of accuracy, must all be observed. These are used in both active and passive skills. Rather of using activities that focus solely on correctness, as Riggenbach and Lazaraton point out, many language teachers use “communicative activities” to promote communicative competence in language students (Riggenbach & Lazaraton, 1991, p.125). The classroom
atmosphere and surroundings are unquestionably important components of effective education. The students place a high importance on these. Teachers that do not want their students to become bored work with a variety of speaking and writing tasks. Not just a lesson plan, but also a term syllabus must be prepared ahead of time for teaching purposes. The substance of such a plan should include some generic activities, as well as a collection of customized exercises tailored to the specific group of learners and with specific goals in mind.

According to Olshtain & Cohen (1991:154) refers that “If we intend to acquire new language, we should become more effective communicators,” Their findings support the notion that while language correctness is important, it is not the most important aspect of speaking activities. To appropriately arrange the class, the lesson plan should incorporate a wide range of activities.

The ‘speaking menu’ offers a variety of speaking activities, ranging from the easiest to the most difficult. As previously stated, a variety of grammatical structures and language are employed to customize the content to a wider range of course participants and steer them to the same or similar aim.

**Speaking Skill**

Speaking can be defined as a social, multimodal speech event with an unpredictable topic, based on its feature. Speaking is sociological in the view that it builds empathy and common ground, preserves and changes cultural identity, and requires communication skills (Thornbury and Slade, 2006, p.17).

**Writing Skill**

As Alderson (2005:154) points out, writing proficiency encompasses the learner's ability to establish and articulate a point of view, convey and exchange information, and use writing for a variety of objectives. Because writing ability is influenced by factors such as cognitive processing, writing audience, and writing aim (Hattie, 2010, :188), this will allow students to become more conscious of their own development and learning activities and so exert some control over them (Cremin & Myhill, 2012,:100). According to Rohman (in Sumiyo, 2000: 5), there are three processes in writing or composing: early writing (pre-writing), writing, and revision.

**METHODOLOGY AND PROCEDURES**

The population of this study is the preparatory school students during the academic year 2020-2021.
The sample consists of 200 students who are randomly selected from the population of the present study.

**Instruments of the Study**

To fulfill the aims of the current study, two instruments have been used by the researcher, namely; a questionnaire which is used to measure students' cognitive styles. On the other side, productive skills’ test is also used to measure students' proficiency in writing and speaking language skills.

**DATA ANALYSIS AND RESULTS**

**Results Related to the First Aim**

The first aim is to be read as “finding out cognitive learning style among Iraqi preparatory school students who study English as a foreign language.

To achieve this aim, the researcher applied the Cognitive Learning Style Scale of (40) items to the research sample of (200) students. The researcher then has extracted the arithmetic mean and the standard deviation for each style. To identify the significance of the difference between the arithmetic mean and the hypothesized mean for each style, the researcher has used the t-test for one sample and the results were as shown in table (1) and figure (1).

**Table : (1) Mean, SD and T-test Values for Cognitive Learning Style**

<table>
<thead>
<tr>
<th>Cognitive Styles</th>
<th>Sample</th>
<th>Mean</th>
<th>SD</th>
<th>Hypothesized mean</th>
<th>T-test Value</th>
<th>Significance 0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impulsive and Reflective</td>
<td>200</td>
<td>16.585</td>
<td>2.841</td>
<td>15</td>
<td>7.889</td>
<td>1.96</td>
</tr>
<tr>
<td>Field – Independent and Dependent</td>
<td>200</td>
<td>15.940</td>
<td>3.342</td>
<td>15</td>
<td>3.977</td>
<td>1.96</td>
</tr>
<tr>
<td>Analytic and Synthetic</td>
<td>200</td>
<td>15.835</td>
<td>3.185</td>
<td>15</td>
<td>3.707</td>
<td>1.96</td>
</tr>
<tr>
<td>Deductive and Inductive</td>
<td>200</td>
<td>15.905</td>
<td>3.507</td>
<td>15</td>
<td>3.650</td>
<td>1.96</td>
</tr>
<tr>
<td>Sharpener and Leveler</td>
<td>200</td>
<td>15.625</td>
<td>2.411</td>
<td>15</td>
<td>3.666</td>
<td>1.96</td>
</tr>
</tbody>
</table>
The table above shows the following:

1. For the impulsive and reflective style, the sample's arithmetic mean (16,585), standard deviation (2,841), hypothesized mean (15), and computed t-test value (7,889) were higher than the tabular value (1.96) at the significance level (0.05) and a degree of freedom (199) indicates that the research sample has this style of learning.

2. For the field-independent and dependent style, the arithmetic mean of the sample was (15,940) and the standard deviation (3,342), and the hypothesized mean (15), and the computed t-test value (3,977) were greater than the tabular value (1.96) at the significance level (0.05) and the degree of freedom (199), indicates that the research sample has this style of learning.

3. For the analytical and synthetical style, the arithmetic mean (15,835), standard deviation (3,185), hypothesized mean (15), and the computed t-test value (3,707) were greater than the tabular value (1,96) at the significance level (0.05) and the degree of freedom (199), indicates that the research sample has this style of learning.

4. For the deductive and inductive style, the sample's arithmetic mean (15,905), standard deviation (3,507), hypothesized mean (15) and computed t-test value (3,650) were higher than the tabular value (1,96) at the significance level (0.05) and a degree of freedom (199), indicates that the research sample has this style of learning.
5. For the global and particular style, the arithmetic mean of the sample was (26,415) and the standard deviation (4,386), and the hypothesized mean (25), and the computed t-test value (4,562) were greater than the tabular value (1.96) at the significance level (0.05) and the degree of freedom (199), indicates that the research sample has this style of learning.

6. For the sharpener and leveler style, the arithmetic mean of the sample (15,625), the standard deviation (2,411), the hypothesized mean (15), and the computed t-test value (3,666) were greater than the tabular value (1.96), at the significance level (0.05) and the degree of freedom (200), indicates that the research sample has this style of learning. The Table (2) shows the results.

Table (2): Cognitive Style Data after Grade-to-percentage Conversion

<table>
<thead>
<tr>
<th>Cognitive Styles</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impulsive and Reflective</td>
<td>0.6910</td>
<td>0.11839</td>
</tr>
<tr>
<td>Field – independent and Dependent</td>
<td>0.6642</td>
<td>0.13927</td>
</tr>
<tr>
<td>Analytic and Synthetic</td>
<td>0.6598</td>
<td>0.13274</td>
</tr>
<tr>
<td>Deductive and Inductive</td>
<td>0.6627</td>
<td>0.14612</td>
</tr>
<tr>
<td>Global and Particular</td>
<td>0.6604</td>
<td>0.10966</td>
</tr>
<tr>
<td>Sharpener and Leveler</td>
<td>0.6510</td>
<td>0.10046</td>
</tr>
</tbody>
</table>

The researcher has used a single variance analysis of repeated measures to confirm the importance of the variations in the research sample's cognitive styles. The Mauchly’s test was used by the researcher to verify these values, as is shown in table (3).

Table (3): Mauchlys Test Values

<table>
<thead>
<tr>
<th>Mauchly’s Test</th>
<th>Freedom</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.696</td>
<td>14</td>
<td>0.074</td>
</tr>
</tbody>
</table>
it is clear that Spherical Assumed is achieved, since the significance level of Muachly's value is (0.074), which is non-significant because it is greater than the significance level which is (0.05), since the Sphericity Assumed is achieved if muachly's value is non-significant, and when the Sphericity Assumed is achieved by testing muachly’s test, we turn to sphericity assumed to find out statistically significant differences in cognitive learning style and table (4) shows spherical test values.

Table (4): Results of Variance Analysis by Sphericity Assumed of Repeated Measure to recognize Variation in Cognitive Learning Styles

<table>
<thead>
<tr>
<th>Variance</th>
<th>Sum of Squares</th>
<th>Degree Of Freedom</th>
<th>Mean of Squares</th>
<th>F – test Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjects</td>
<td>1,163</td>
<td>199</td>
<td>0.006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>0,185</td>
<td>5</td>
<td>0.037</td>
<td>4.111</td>
<td>Significance</td>
</tr>
<tr>
<td>Residual</td>
<td>9,093</td>
<td>995</td>
<td>0.009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10,441</td>
<td>1199</td>
<td>0.008</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table above shows that when there are statistically significant differences in cognitive learning styles, the arithmetic mean value is statistically significant at the significance level (0.05), so the researcher has used the Sidak test for post-comparisons. This is seen in table (5)
It is clear from table (5) that three comparisons were statistically significant between cognitive style (I) and other styles (III, V and VI) in favour of style (I). In addition, all other comparisons were not statistical. The researcher can see from the above findings that the cognitive learning style (impulsive and reflective style) is the most popular style among the Iraqi preparatory students in the study sample, as is shown in figure (2) below.

Table (5): Sidak test for post – comparisons

<table>
<thead>
<tr>
<th>Style</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>0.6910</td>
</tr>
<tr>
<td>A2</td>
<td>0.6642</td>
</tr>
<tr>
<td>A3</td>
<td>0.6598</td>
</tr>
<tr>
<td>A4</td>
<td>0.6627</td>
</tr>
<tr>
<td>A5</td>
<td>0.6604</td>
</tr>
<tr>
<td>A6</td>
<td>0.6510</td>
</tr>
</tbody>
</table>
The Prevailing Cognitive Learning Style of the Study Sample

Results Related to the Second Aim

The second aim is to be read as “Finding out the productive skills of Iraqi preparatory school students who study English as a foreign language”.

To achieve this aim, the researcher has applied the productive skills test to a research sample of 200 students. After extracting the scores of the test study sample with each skill, the researcher has used the T-test of a sample to determine the significance of the difference between the arithmetic mean of each skill and its hypothesized mean, and the table below shows these results.
Table (6): Arithmetic Mean, SD and t-test Values for Productive Skills Test

<table>
<thead>
<tr>
<th></th>
<th>Speaking Skill</th>
<th>Writing Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Size</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Mean</td>
<td>24,525</td>
<td>26,860</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>4,313</td>
<td>5,089</td>
</tr>
<tr>
<td>Hypothesized Mean</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>t-test Value</td>
<td>1,557</td>
<td>5,169</td>
</tr>
<tr>
<td>Significance</td>
<td>1.96</td>
<td>1.96</td>
</tr>
</tbody>
</table>

The table above shows the following:

1. With regard to the speaking skill, the arithmetic mean sample score (24,525) and standard deviation (4,313), and the hypothesized mean (25), the computed t-test value (1,557) were smaller than the tabular value (1.96) at the significance level (0.05) and the degree of freedom (199), which means that the study sample has the skill of speaking at an average level.

2. For a writing skill, the arithmetic mean sample score (26,860) and a standard deviation (5,089), and a hypothesized mean (25), the computed t-test value (5,169) were greater than the tabular value (1.96) at an significance level (0.05) and a degree of freedom (199), means that the study sample has a high level of writing skill. Figure (3) illustrates the arithmetic and hypothesized mean of productive skills.

*Figure (3): Arithmetic and Hypothesized Mean and of Productive Skills.*
Regarding the Third Aim

The third aim is to be read as "finding out the correlation between cognitive learning styles and the productive skills of Iraqi preparatory school students who study English as a foreign language".

To verify this aim, the researcher has taken the students’ answers to the scale of cognitive learning style and the test of productive skills. The researcher then has used the Pearson - correlation coefficient. The results were as shown in table (7)

Table (7): The Correlation between Cognitive Styles and Productive Skills

<table>
<thead>
<tr>
<th>Cognitive Style</th>
<th>Productive Skills</th>
<th>Number</th>
<th>Correlation Coefficient Value</th>
<th>T – test value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Computed Tabular</td>
<td></td>
<td>(0.05)</td>
</tr>
<tr>
<td>Impulsive and Reflective</td>
<td>Speaking</td>
<td>200</td>
<td>0.200</td>
<td>2.857</td>
<td>1.96</td>
</tr>
<tr>
<td></td>
<td>Writing</td>
<td>200</td>
<td>0.195</td>
<td>2.785</td>
<td>1.96</td>
</tr>
<tr>
<td>Field – independent and Dependent</td>
<td>Speaking</td>
<td>200</td>
<td>0.305</td>
<td>4.485</td>
<td>1.96</td>
</tr>
<tr>
<td></td>
<td>Writing</td>
<td>200</td>
<td>0.273</td>
<td>4.015</td>
<td>1.96</td>
</tr>
<tr>
<td>Analytic and Synthetic</td>
<td>Speaking</td>
<td>200</td>
<td>0.265</td>
<td>3.897</td>
<td>1.96</td>
</tr>
<tr>
<td></td>
<td>Writing</td>
<td>200</td>
<td>0.232</td>
<td>3.362</td>
<td>1.96</td>
</tr>
<tr>
<td>Deductive and Inductive</td>
<td>Speaking</td>
<td>200</td>
<td>0.217</td>
<td>3.145</td>
<td>1.96</td>
</tr>
<tr>
<td></td>
<td>Writing</td>
<td>200</td>
<td>0.198</td>
<td>2.828</td>
<td>1.96</td>
</tr>
<tr>
<td>Global and Particular</td>
<td>Speaking</td>
<td>200</td>
<td>0.249</td>
<td>3.609</td>
<td>1.96</td>
</tr>
<tr>
<td></td>
<td>Writing</td>
<td>200</td>
<td>0.212</td>
<td>3.072</td>
<td>1.96</td>
</tr>
<tr>
<td>Sharpener and Leveler</td>
<td>Speaking</td>
<td>200</td>
<td>0.146</td>
<td>2.086</td>
<td>1.96</td>
</tr>
<tr>
<td></td>
<td>Writing</td>
<td>200</td>
<td>0.248</td>
<td>3.594</td>
<td>1.96</td>
</tr>
</tbody>
</table>
The table above shows the following:

1. For the impulsive and reflective style, the sample's arithmetic mean (16,585), standard deviation (2,841), hypothesized mean (15) and computed t-test value (7,889) were higher than the tabular value (1,96) of the sample at the significance level (0.05) and a degree of freedom (199), indicates that the research sample has this style of learning.

2. For the field-independent and dependent style, the arithmetic mean of the sample was (15,940) and the standard deviation (3,342), and the hypothesized mean (15), and the computed t-test value (3,977) were greater than the tabular value (1.96) at the significance level (0.05) and the degree of freedom (199), indicates that the research sample has this style of learning.

3. For the analytical and synthetical style, the arithmetic mean (15,835), standard deviation (3,185), hypothesized mean (15), and the computed t-test value (3,707) were greater than the tabular value (1.96) at the significance level (0.05) and the degree of freedom (199), indicates that the research sample has this style of learning.

4. For the deductive and inductive style, the sample's arithmetic mean (15,905), standard deviation (3,507), hypothesized mean (15) and computed t-test value (3,650) were higher than the tabular value (1,96) at the significance level (0.05) and a degree of freedom (199), indicates that the research sample has this style of learning.

5. For the global and particular style, the arithmetic mean of the sample was (26,415) and the standard deviation (4,386), and the hypothesized mean (25), and the computed t-test value (4,562) were greater than the tabular value (1.96) at the significance level (0.05) and the degree of freedom (199), indicates that the research sample has this style of learning.

6. For the sharpener and leveler style, the arithmetic mean of the sample (15,625), the standard deviation (2,411), the hypothesized mean (15), and the computed t-test value (3,666) were greater than the tabular value (1.96), at the significance level (0.05) and the degree of freedom (200), indicates that the research sample has this style of learning.

Through the findings of the current study, the following conclusions can be inferred:

1. The present study reveals that the most common cognitive learning style to preparatory school students is "impulsive and reflective cognitive style". The students' success in productive skills
increases when they use this style of learning. In other words, an individual who uses his preferred style of learning will become more efficient in productive skills.

2. The study also reveals that the preparatory school students have an intermediate level of speaking skill while they have a high level of writing skill.

3. The study also finds out a statistically significant correlation between cognitive learning styles and the productive skills. In other words, an individual who uses his preferred style of learning will become more progressed and succeed in productive skills.

4. Correlation investigations are necessary to provide further evidence for the impact of cognitive styles on English. This form of research could be critical in identifying how and to what extent individual variations in cognitive styles influence learners' overall interactions. This expertise can then be applied to adapting language teaching methodologies to meet the needs of a wide range of students.

5. Teachers could select suitable speaking and writing strategies by understanding their students' cognitive styles. Students' learning would be enhanced and maximized as a result of this trend.

6. Every school's English committee should have clear strategies in place to improve and track their students' English language productive skills. They should also define guidelines and criteria for assigning resources that help students improve their language skills. They should also offer direct help to schools in designing to enable them with appropriate techniques and strategies for teaching English as a foreign language.

7. Teachers in EFL classrooms should be aware of all cognitive learning styles among students in preparatory schools. This could lead them to stimulate the guidance aspects of their brains in order to cope with their ideas and orientations when it comes to comprehending materials.

8. Finally, because of the importance of such data for decision making, it is critical to use several questionnaire as the data collection methods to analyze cognitive styles from various viewpoints in order to obtain more accurate findings.
REFERENCES


