# Relationship between cognitive strategies and scholar achievement in French language among third-year secondary school students

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# العلاقة بين استراتيجيات التعلم المعرفية والتحصيل الدراسي في اللغة الفرنسية لدى طلاب السنة الثالثة ثانوي

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Abstract The aim of this study is to find out the relationship between cognitive learning strategies and scholar achievement in French language course as being a foreign language among a sample of third-year secondary school students' literary stream; in addition, it seeks to give answers to the following question: Is there a positive correlation between cognitive learning strategies and scholar achievement in French language?

This study has been conducted to the whole studied sample; it consists of 110 pupils in whom 30 pupils had withdrawn (incomplete questionnaire), as a result the real number of samples is 80. This study is limited to secondary school of Oued Souf city (Algeria).

The study applies Oxford's second language learning strategies questionnaire and it resulted as follows: Yes, there is a positive correlation relationship between cognitive learning strategies and scholar achievement in French language.

Key words: Cognitive learning strategies, French language, scholar achievement, Secondary school students.

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ملخص: تهدف الدراسة الحالية إلى معرفة العلاقة بين استراتيجيات التعلم المعرفية والتحصيل الدراسي في اللغة الفرنسية لدى طلاب السنة الثالثة ثانوي. تسعى الدراسة للإجابة عن السؤال الرئيس: هل توجد علاقة ارتباطية موجبة بين استراتيجيات التعلم المعرفية والتحصيل الدراسي في اللغة الفرنسية؟

تم تطبيق هذه الدراسة على مجتمع الدراسة بأكمله وتشمل (110) تلميذ وتلميذة تم سحب (30) تلميذ (استبيان غير مكتمل)، وبذلك يكون عدد العينة الإجمالي (80) طالبًا، وتم اجراء الدراسة في ثانويات ولاية وادي سوف (الجزائر).

طبقت الدراسة استبيان استراتيجيات تعلم اللغة ل "أكسفورد" (SILL). أسفرت الدراسة عن النتيجة التالية:

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هناك علاقة ارتباطية موجبة بين استراتيجيات التعلم المعرفية والتحصيل الدراسي في اللغة الفرنسية.

كلمات مفتاحية: استراتيجيات التعلم المعرفية، اللغة الفرنسية، التحصيل الدراسي، طلاب السنة الثالثة ثانوي.

## 1.    Problematic:

Cognitive learning strategies as defined by (Cyr, P) are an interaction between the learner and the subject under study, a mental and physical manipulation of the subject and the application of specific techniques to solve a problem or execute a learning task. Cognitive strategies are often more concrete and easier to observe. They are at the hub of the act of learning (Cyr, P, 1998, 46-47). Therefore, it is obvious that each student uses his or her own strategies. And the best student is the one who seeks knowledge and makes efforts to discover and develop them through the use of the most effective learning strategies; that develop motivation and promote commitment to achieve a greater success. From this, appears the importance of the good use of different learning strategies, in particular the cognitive strategies and their relation with scholar achievement in all subjects, especially French as being a foreign language where students find difficulties.

Hence, our problematic is as follows:

Is there a positive correlation between cognitive learning strategies and scholar achievement in French language among Third-year secondary school students?

## 2.    Hypothesis

The study seeks to verify the following hypothesis:

There is a statistically significant positive correlation between cognitive learning strategies and scholar achievement in French language among third year secondary school students.

## 3.    Objectives:

This study aims at:

- Focusing on a better understanding of cognitive learning strategies.
- Clarifying the relationship between these strategies and the level of scholar achievement in French language among third year secondary school students.

## 4.    Significance of the study:

- To develop the learners' autonomy; in other words, develop their implication by ensuring their responsibility.
- To help students identify and use the efficient cognitive strategies and apply them, especially in French language class as being a foreign language.

- To give some suggestions, that may help anyone who is in relationship with the learning process, to know the different types of cognitive learning strategies used by students during their learning task.

## 5. Procedural definition of the concepts of the study:

### 5.1. Cognitive Strategies:

Cognitive Strategies are considered as means used by learners at the mental level. They are means of perception, memorization, development of treatment of information and problem solving (Oxford, R, 1990, 43). They are manifested through the student's grades on Oxford's cognitive scale (used in this study)

### 5.2. Scholar achievement:

It is a synthesis of achievement and information obtained by the learner in school subjects, which is reflected by school performance (Dasouki. I. 65, 1991). In this case, it is represented by the average obtained by students in French language class.

## 6. Theoretical framework:

### 6.1. Concept of learning strategies:

Today the word "strategy" is well known in domain of social life, so what is a strategy? From where comes this interest in learning strategies in domain of education? Particularly in acquiring a foreign language?

Strategy originates from the Greek word /stratighia/ which is derived from /stratigos which means general, stratige/ a military word. Le petit Robber dictionary defines strategy as a set of coordinated actions and manoeuvres for victory.

In field of education "Legendre 1993 ", considers learning strategies as a structured set by a subject in order to promote a better achievement of objectives in a pedagogical situation.

### 6.2. Oxford typology (1985-1990)

Oxford's works are the most important contributions to the field of research and broadcasting knowledge about second language acquisition (L2). Oxford proposed learning strategies classifications that use labels (Rubin, 1981), direct versus indirect and those of (O'Malley and Coll, 1985a): cognitive, metacognitive, and socio-affective. In its prominent book, Oxford 1990), used this terminology and carried on its own second language acquisition strategies by proposing a detailed labelling (Cyr, P, 1998, 30).

First, by defining learning strategies as being procedures used by learners to improve their learning "later on, tools for active and autonomous involvement"(Oxford, 1990, 1), and classifying it into two broad categories: direct and indirect. At this point, the given definitions were similar to

those in previous writings: direct strategies involve a manipulation of target language and use of mental processes, while indirect strategies mentor or support learning. Second, Oxford subdivides direct strategies into mnemonics: cognitive and compensatory, and indirect strategies into: metacognitive, affective and social (Cyr, P, 1998, 31).

On this subject, according to the literature (Oxford 1990), the latter classification of training strategies could be considered the longest and, thus, undeniably the most addressed. If this is the case, our upcoming definition will maintain its farther framing.

## 6.3.    Direct strategies:

Direct strategies involve a manipulation of the target language and making use of the mental procedures. In other words, it implies direct manipulation of the linguistic matter, and is supposed to improve directly the acquisition of the language. Direct strategies are of three types: mnemonic strategies, cognitive strategies, and compensation strategies (Oxford, R, 1990, 42-47).

## 6.4.    Indirect strategies:

Indirect strategies frame, mentor or support learning. Furthermore, they do not involve direct manipulation of the language, yet they are also important for the learning process. Indirect strategies are of three types: metacognitive strategies, affective strategies, and social strategies (Oxford, R, 1990, 48-53).

## 6.5.    Cognitive strategies classification:

In order to help with the linguistic information process and speech production, this category is divided into sub-categories to finish at a broad listing of basic units or specific cognitive strategies. This classification is presented briefly in the following table cognitive strategies arranged by Oxford (Oxford, 1990, 16-17):

| Cognitive Strategies | | | |
|---|---|---|---|
| To practice language | Receive and emit images | Analyse and think | Create structures |
| Repeat | Quick understanding | To Think / deduce | Take notes |
| During language classes practice sounds and Graphs | Use resources to emit and receive messages | To analyse expressions | To summarize |

| Recognize and use formulas and patterns | | To compare with known languages | To highlight |
|---|---|---|---|
| Recombine | | To translate | |
| To practice language in an authentic situation | | To transfer | |

## 7.    Previous studies

### 7.1.    Language learning strategies and language Proficiency -    Investigating the relationship in Hong Kong (1999):

This article accounts on a study of language learning strategies amongst a group of learners in Hong Kong. It aimed at increasing the level of using strategies, then analysing the level of association between strategy use and linguistic competency. Strategy Inventory for Language Learning (SILL) questionnaire created by Oxford (1990, pp. 293-300) was used in this study, strategies were divided into six categories: memory, cognitive, compensatory, metacognitive, affective and social. The results showed that compensatory and metacognitive strategies were the most often used, while emotional and memory strategies were the least used. This study, also, discussed previous studies that dealt with the link between the use of strategy and the linguistic competency, as well as the way to measure this link. This study showed a significant variation in the relationship between competency and strategy in elven out of fifty possible strategies. Out of these eleven strategies, nine were in the cognitive strategy, one in the compensatory category, and one within the social category.  The article concludes by asking a question about the relevance from using SILL simultaneously with a measure of competence as a way to establish a relation between strategy use and competency and proposing a new way for research on languages learning strategies.

### 7.2.    English as a second language learner strategy of adult Asian students using the strategy inventory for language learning (sill) (1990, Institute: University of San Francisco):

This study investigated the learner strategies used by university-level, Asian ESL learners (N = 141) as self-reported in a language strategies questionnaire (the SILL) through which the researcher analysed patterns of strategy use. The student population was limited to intermediate and advanced-level Asian ESL students, proficiency levels being determined by scores on the Test of English as a Foreign Language (TOEFL). This study also identified other attribution variables (e.g., sex, major and

ethnicity) which were associated with learner strategy choice and frequency of use. Furthermore, factor analysis was used to determine the underlying factors on the SILL. Results of this study indicated a relatively high use of almost of the strategies, particularly in the metacognitive and social categories. The mid-range TOEFL score group showed significantly greater strategy use than either the lower or the higher-proficiency range group. Although sex did not seem to be a significant factor in determining strategy use, both ethnicity and academic major were. A high internal consistency reliability (Cronbach"s alpha) was reported for the whole SILL (0.87) and for five of the six strategy categories, that is to say mnemonic, cognitive, compensatory, metacognitive, affective, and social), and factor analysis indicated high factor loadings for four of the categories.

## 7.3. Language Learning Strategies Used By Japanese University Students (Akihiko Mochizuki, First Published December 1, 1999 Research Article) [1]

This study examines:

The kinds of strategies Japanese university students use, the kinds of factors that affect the learner's choice of strategies, and the reliability of the learner's self-evaluation of English proficiency.

The Second Grade Test of the Society of Testing English Proficiency (STEP) and an 80 item Strategy Inventory for Language Learning (SILL) were conducted on 44 second-year students and 113 first-year students at a state-run university in Central Japan in May, 1996. Results indicate the following things: First, Japanese university students use compensation strategies the most often and affective ones the least. Second, more proficient students use cognitive and metacognitive strategies than the less proficient students. Third, the factors which influence the choice of strategies are major, motivation, enjoyment of English learning and gender. Fourth, self-evaluation seems not very reliable.

## 7.4. Assessing the use of language learning strategies worldwide with the ESL/EFL version of the Strategy Inventory for Language Learning (SILL) - Author links open overlay panel (Rebecca L. Oxford , Judith A. Burry-Stock)[2]:

With factor analysis contributions by Neil Anderson, Ohio University, USA; Deena Boraie, American University in Cairo, Egypt; John Green, University of Puerto Rico at Mayaguez and Salem State College, USA; Gene Halleck, Oklahoma State University, USA; Omneya Kassabgy, Career Development Centre, Cairo, Egypt; Victoria Talbott, Skagit Valley Junior College, USA; Yoshinori

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Watanabe, Japan; Nae-Dong Yang, National Taiwan University, Taiwan, ROC; Wenpeng Zhang and Ohio University, USA.

Summative rating scales are among the most efficient and comprehensive ways to assess frequency of language learning strategy use. This article discusses applications of this assessment technique and describes the most widely employed strategy scale, the ESL/EFL version of the Strategy Inventory for Language Learning (SILL). Reliability of the SILL is high across many cultural groups. Validity of the SILL rests on its predictive and correlative link with language performance (course grades, standardized test scores, ratings of proficiency), as well as its confirmed relationship to sensory preferences. Studies of strategy use frequencies and factor analytic results across cultures are included.

**Language Learning Strategy in Palestine (Wafa Abu Shmais 2003):**

This study reports on English language and learning strategies used by English-speaking Arabic speakers registered at An-Najah National University in Palestine. The subjects of the study were (99) students, boys and girls still studying for their High school degree. The study also examines the frequency of strategies for using these students by gender and variables controlling. The master degree translates into the students learning level (sophomore, junior, senior), self-assessment of English proficiency (university students in the average of English classes) and language self-efficacy (how well do students perceive themselves as learners in English). The results of this study showed that the An-Najah English majors used high to medium frequency learning strategies, the highest grade (79.6%) was metacognitive strategies, and the lowest (63%) was compensation strategies. In general, the results show that sex and competence do not have a significant difference on the use of strategies. Based on these findings, the researcher recommends that more training should be given to cognitive use and memory compensation by integrating strategies into ordinary classroom activities

## 8. Method and results:

### 8.1. Sample of the study

The sample of the study includes (80) students chosen spontaneously from third year secondary school students from the literary stream.

### 8.2. Means of measurement

Oxford's "Strategy Inventory for Language Learning SILL" was used as an instrument "cognitive strategies (part B from 10 to 23)".

### 8.3. French language report cards

Correction scale: The scale items were corrected by grading gradually according to the Likert scale, in which the respondent selects one out of five answers that he considers appropriate. The following table shows positive score distribution for second language learning strategies.

**Table n° 1**

The grade distribution shows the positive items of the second language learning strategy

| Appreciation scale | Grade |
|---|---|
| Strongly agree | 5 |
| Agree | 4 |
| Neutral | 3 |
| Disagree | 2 |
| Strongly disagree | 1 |

Negative items were corrected in bottom-up process as shown in the following table

**Table n° 2**

The grade distribution shows the negative items of the second language learning strategy

| Appreciation scale | Grade |
|---|---|
| Strongly agree | 1 |
| Agree | 2 |
| Neutral | 3 |
| Disagree | 4 |
| Strongly disagree | 5 |

The high and low grades are as follow:

High scale grade: $5 \times 50 = 250$

Low scale grade: $1 \times 50 = 50$

## 9. Statistical techniques:

Obtained result were analysed by the SPSS 20 using the following methods

- Frequency rate.
- Arithmetic average.
- Correlation coefficient of Spearman ranks.
- Spearman's rank correlation coefficient

## 10. limitations of the study:

- Geographical limit: the study is limited to secondary school of Oued Souf city, (Algeria).
- Time limit: the study covers the third term (April-May) of the 2017-2018 academic year.
- Studied population: All third-year secondary school students – foreign language, literary stream.

### 11. Methods of the study

In order to check the hypothesis and frame credible answers to the questions, the method counted on the descriptive-correlative approach.

### 12. Results

### 12.1. Result of the main question

There is a significant positive statistical correlation between cognitive learning strategies and scholar achievement concerning French language class among third year secondary school literary stream students. To achieve the objectives of the study, Spearman's correlation coefficient was used, which clearly showed in the following table:

Table n° 1: Spearman's correlation coefficient results between cognitive learning strategies and scholar achievement.

|  | total | Arithmetic average | R | Index level |
|---|---|---|---|---|
| Scholar achievement | 583.46 | 7.29 | 0.534 | 0.01 |
| Cognitive learning strategies | 4144 | 51.80 | | |

This shows the existence of a statistically significant positive correlative relationship between cognitive learning strategies and scholar achievement in French as being a second language, where the Spearman correlation coefficient equals to (0.53) at the index level (0.01).

### 12.2. Results Interpretation

Results to the main question:

The hypothesis is positively achieved, that is, with the increase in the cognitive learning strategies degree the scholar achievement degree diminishes. This shows that cognitive strategies are very realistic and easy to be remembered. (Cyr, P, 1998, 46-97) emphasized that cognitive strategies are often very easy to be observed, and are found to be at the centre of learning and acquisition. Among the cognitive strategies there is the language practice strategy, often referred to by students in second language acquisition. This can indicate the development of a structured classroom where the learner finds himself/herself in front of an opportunity to choose or to practice spontaneously in a real communication situation. However, differences among simple control of the opportunities in a class to practice language (which proves the cognitive strategy) must be understood. Oxford (1990)

considers that language practice is a direct cognitive strategy, which contains the following actions: repetition and language practice in a natural situation as well as the practice of language in a formal situation. Language practice may also involve several other types of actions: Self-Talk in second language, answering questions in classroom quietly, and repeating loudly. Many different researches, (Ramsy, 1980) and (Wesche, 1979), showed the existence of a solid relationship between loudly repetition, degree of efficiency, understanding, and linguistic capacities. This relationship is manifested through the amount of words acquired in French language, which facilitate the understanding and mastery, therefore an effective use of the French language. In addition, an efficient participation during French language courses, answering tests questions; all of this is a positive result to the scholar achievements.        From this we can say that whenever the students practice the foreign language, by seizing the opportunities of communication, recording new words in booklet, this may ease the process of foreign language acquisition.  Many foreign languages teachers recommend their students to reorganize their knowledge to make greater benefits otherwise their revision would be pointless. After this, the student will think, analyse, proof and conclude by using the textual or no-textual content in order to overcome the deficiencies in language; after that comparing former element to establish units, such as summarizing or recording information, to raise French language academic achievement.

The SILL questionnaire can be a starting point for such researches, providing a general idea that cognitive learning strategies have important levels of relationship and scholar achievement, and are necessary to show what these cognitive learning strategies mean to students in their learning situations. These strategies can be measured over a period of time among different groups of learners, but through a use of long-term methods that provide a clear idea of the relationship between strategies to learn language and scholar achievement.

Hence the researcher recommends that cognitive learning strategies should be developed as an integral part of the curriculum. In addition, the teacher should take care of teaching them, cognitive learning strategies, to students and train them on how to apply them to meet requirements of studied tasks.

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