

COGNITION AND ITS EFFECT ON SECOND LANGUAGE ENGLISH LEARNING IN SOME SELECTED SECONDARY SCHOOLS IN EKITI STATE

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Abstract

The study investigated cognition and its effect on second language English learning in some selected secondary schools in Ekiti State. The sample consisted of one hundred and twenty (120) respondents that was selected from Senior Secondary School one to three (SSS I to SSS 3) in Ikere Local Government Area of Ekiti State. A simple random sampling technique was employed in the selection of the 120 respondents. Government owned schools were used for the study. Gender equality was considered in selecting respondents for the study. Hence, the sample for the study comprised of both male and female students in balanced proportion. The study used a descriptive research of survey type. Descriptive research of survey type is preplanned and structured in design so that the information collected can be statistically inferred on a population. The instrument used for data collection for this survey was a self-structured questionnaire tagged “Cognition and its Effect on Second Language English Learning (CESLEL)”. Two research questions were raised to guide the study and they were answered descriptively using mean and Standard Deviation. One research hypothesis was formulated for the study and tested using Chi square test of independence. Based on the data analysis, findings revealed that there was significant effect of cognition on second language (English) learning and acquisition among secondary school students. The study concluded that cognitive strategies were effective in the learning of English as a second language by L2 learners and that cognitive restructuring through interruption and redirect of thoughts has momentous effect in learning English language among secondary school students. Sequel to the findings of the study, it was recommended that learners should build up skills that improve their personal learning and assessment, and learn through visual, audio, and kinesthetic media. Learners should endeavour to take numerous detailed note in class during lessons.

Keywords: Cognition; Second language, English language, English learners, Ekiti State

Introduction

The term “Cognition” literally refers to the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses. It means to know something or think about something. Cognition is concerned with “thinking” and “knowing things”. One engages oneself in the process of thinking while obtaining information followed by its processing and storage (Bayne, 2019).

Cognitivism is a linguistic current that appeared in the late 1950s and supplanted the behaviourist approach to learning. By then, learning theory had made a shift away from the use of behavioural procedures in education to an approach that drew on cognitive science. Educational

practitioners moved away from classroom practices that considered only observable learners' behaviour and espoused methods that focused primarily on mental processes including thinking, problem-solving, language, concept formation and information processing. Thus, cognitive theory has gained too much prestige among existing learning theories (Ertmer & Newby, 2013).

Several studies have investigated how cognitive strategies impact students' aptitude in learning a foreign language. Normally students with high motivation levels will opt for language learning strategy than the students with lower motivation. Results from this study serve as guidance to both learner and teacher because they can have some insight regarding different types

of patterns found in acquiring a new language. As for teachers, this finding can guide towards better teaching techniques and helps in developing a better strategy in accommodating the students in learning the English language.

Students studying English as a second language constitute a significant percentage of the population around the globe. Nowadays, according to (Siddiqui, 2016), it is undeniable that English has played an increasingly important role as the medium of communication among people from different countries; Nigeria is no exception.

Research Problem Statement

The use of Cognitive and Strategies in Foreign Language Learning contributes to several factors. According to Anthonysamy (2021) through her study entitled “The Use of Cognitive Strategies for Undisrupted Online Learning: Preparing University Students in the Age of Pandemic”, learners have the ability to assess the understanding of the course content and they are able to give more effort in managing their learning process when using cognitive strategies. According to Ariffin et al (2021) from the study entitled “Discovering Students' Strategies in Learning English Online”, learners were left isolated and they were required to be independent in the learning process. Despite the advantages gained in learning foreign language, students reportedly faced difficulties in learning a new language. This study therefore seeks to investigate cognition and its effect on second language English learning in some selected secondary schools in Ekiti State.

Purpose of the Study

The study is done to investigate cognition and its effect on second language English learning in some selected secondary schools in Ekiti State. Specifically, this study is set to;

- i. Determine how learners use cognitive strategies to learn English Language.
- ii. Examine cognitive restructuring through interruption and redirect of thoughts and its

effect among students.

Research Questions

The following research questions were raised to guide the study:

1. How do learners use Cognitive strategies to learn English Language?
2. Does cognition have any effect on secondary school students through interruption and redirect of thoughts?

Research Hypothesis

The following hypothesis was formulated for the study;

H₀₁: There is no significant effect of cognition on second language learning and acquisition among secondary school students.

H_{A1}: There is significant effect of cognition on second language learning and acquisition among secondary school students.

Literature Review

The Model of Cognitive skills by Schraw and Dennison (1994) as cited in Siddiqui (2016) was adopted by the researcher for the conduction of this study. According to this model, Cognition has two basic components. One of them is Cognitive knowledge whereas the other is Cognition regulation. Cognitive knowledge is further divided into three factors. One of them is Declarative whereas the second of them is Procedural and the third is Conditional knowledge. The second component of Cognition is Cognition regulation which actually comprise of Cognitive skills. There are 5 Cognitive skills. One of those is planning, the second is Information Management, the third is Monitoring and the fourth is Debugging whereas the fifth is Evaluation (Amzil & Stine-Morrow, 2013; Rahman, 2011).

It is apparent that without communicative competence in English, opportunities for a better life remain elusive, and the poverty level of young graduates deepens abysmally despite being educated. One major cause of this incompetence is due to improper English language teaching by unqualified teachers (Opoola & Fatiloro,

2014). If it is not well taught, it certainly cannot be correctly learnt and competently used by learners.

Theoretical Framework

The study adopted two major theories of language: behaviouristic and cognitive theories. Behaviouristic or imitation or reinforcement theory was proposed by Skinner in 1957 and prevailed between the 1920s and 1960s. Behaviourists patterned the language learning process after Pavlov's idea of conditioning, which centres on three procedural stages of stimulus, response, and reinforcement. Essentially, the theory suggests that learners become proficient in the usage of a language, like a mother tongue, by consistently imitating his/her teacher and constant practice followed by positive reinforcement (rewards) from the teacher (Bell, 1981).

The cognitive or mentalist theory holds that learning is socially-oriented. The LAD features the power to distinguish one speech sounds from the other, organize and classify linguistic events, filters the possible linguistic system from the impossible ones, and the ability to select data with constant evaluation. By this, the learner would become competent in the knowledge of the grammar of the language (Harmer, 1983). The theory, therefore, submits that language learning is a mental process (Bell, 1981; Titone & Danesi, 1985).

Empirical Studies

A study on cognitive factors in second language acquisition was carried out by Phan, Phuong and Ho (2019). The study focused on the role cognitive factors play in improving the educational quality provided to English Language students. The study found that students of the English Language Faculty of BVU do possess certain levels of one or both types of intelligence. Some students may find it easy to express their ideas or thoughts in English, to convey topic focused points in their written essays, or simply to use languages and communication as a tool to achieve what they want, such as persuading others, negotiating, or

consulting, and these are the ones that have a high power of linguistic intelligence.

Also, Ali, Ashfaq and Batool (2022) conducted a research on effect of metacognitive skills on prospective teachers' oral task performance. Based on their findings, it has been depicted that Metacognitive skills development training was found to be effective and developed Metacognitive skills in the prospective teachers. The study also concluded that Metacognitive skills highly and positively affect the prospective teachers' academic performance. They recommended that the teacher educators should use Metacognitive development strategies to develop these skills in prospective teachers so that their oral task performance could be enhanced.

An investigation of the use of cognitive and metacognitive strategies in foreign language learning was conducted by Idris, Isa, Zakaria, Taib, Ismail and Rahmat (2022). The study was done to investigate the strategies learners use to learn a foreign language. Specifically, this study is done to examine how learners use Cognitive strategies to learn French and how learners use Metacognitive strategies to learn French. Data analysis from the study revealed interesting findings in the use of cognitive and metacognitive strategies for foreign language learning. The study by Adebileje and Akinola (2020) explored the teaching and learning English as a second language in Nigeria: Examining evolving approaches and methods. The study examined language teaching and learning theories in a bid to consider evolving and appropriate approaches and methods for efficient teaching and learning English as a second language in Nigeria.

Methodology

Research Design

The research design for this study was a descriptive research of survey type. Descriptive research of survey type is preplanned and structured in design so that the information collected can be statistically inferred on a population.

Population and Sample

The population for this study consisted of all the 3,240 Students of Public Senior Secondary Schools in Ikere Local Government Area of Ekiti State. The population comprised of both male and female students from the sampled schools. The sample consisted of one hundred and twenty (120) respondents that were selected from Senior Secondary School one to three (SSS I to SSS 3) in Ikere Local Government Area of Ekiti State. The sample was specifically chosen to represent the generality of all the students in Ikere Local Government Area. A simple random sample was employed in the selection of the 120 respondents. Public schools were used for the study.

Instrumentation

The instrument used for data collection for this survey was a self-structured questionnaire tagged "Cognition and its Effect on Second Language English Learning (CESLEL)". This was due to the nature of information required and the form of analysis to be conducted. The instrument was designed and administered on the respondents in the sampled senior secondary schools in Ikere Local Government Area of Ekiti State, Nigeria. The instrument was made of a four point Likert scale rating of; Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The Instrument consisted of two parts. Part A deal with the personal data of the respondents while part B contained response items structured to elicit information.

Validity and Reliability of the Instrument

The face and content validities of the instrument were ascertained by two (2) Tests and Measurement experts from College of Education, Bamidele Olumilua University of Education, Science and Technology, Ikere. A reliability index of 0.79 was obtained which is high enough, hence the instrument was adjudged to be reliable for the study.

Administration of Instrument and Method of Data Analysis

The instrument was administered on the respondents with the selfless assistance of their English Language teachers who served as research assistants after they had been briefed about the objective of the study and had been trained by the researcher on how to administer the instrument, and the result carefully recorded. The questionnaire was administered during English period with the permission of the teacher and was collected on the spot to ensured 100% response rate. Data collected was analyzed using the descriptive statistic and inferential statistic. The descriptive analysis was analyzed using mean and Standard Deviation. The lone hypothesis formulated for the study was tested using Chi square test of independent sample at 0.05 level of significance.

Decision Rule: Cluster mean value greater than 2.5 indicated a significant relationship and influence while the cluster mean value less than 2.5 indicated otherwise.

Results and Data Analysis

This section presents the results of the study based on the data collected from the field to provide answers to research questions and hypotheses raised in the study.

Research Question 1

How do learners use Cognitive strategies to learn English Language?

Table 1: Responses to how learners use Cognitive strategies to learn English Language

S/N	Item	Mean	SD	Remark
1	When I study for the classes, I practice saying the material to myself over and over	3.07	.340	Agree
2	When studying for the courses, I read my class notes and the course readings over and over again	4.08	.361	Agree
3	I memorize key words to remind me of important concepts in this class	3.22	.415	Agree
4	I make lists of important items for the courses and memorize the lists	3.04	.184	Agree
5	When I study the re ading for the courses in the classroom, I outline the material to help me organize my thoughts	3.18	.385	Agree
6	When I study for the courses, I go through the readings and my class notes and try to find the most important ideals	3.17	.377	Agree

Cluster mean = **3.29**

Table 1 showed the response to how learners use Cognitive strategies to learn English Language in senior secondary schools. The cluster mean of 3.29 gotten from the students' responses is greater than the bench mark which is 2.5 (that is, $3.29 > 2.5$). By implication, cluster mean of 3.29 indicated that a greater number of respondents agreed that second language learners uses cognitive strategies to learn English language.

In item 1, a mean score of 3.07 with corresponding Standard Deviation of 0.340 was obtained from the analysis. This shows a very significant value of the mean to the assertion that when studying for classes, students practice saying the material to themselves over and over. In item 2, a greater number of respondents agreed that when studying for the courses, they read their class notes and the course readings over and over again, and this resulted to a mean score of 4.08 with corresponding Standard Deviation of 0.361. Also, in item 3, a mean scorer of 3.22 with corresponding Standard Deviation of 0.415 was obtained from the analysis. This

equally established students memorize key words to remind them of important concepts in their class.

In item 4, most of the respondents held that they make lists of important items for the courses and memorize the lists, and this constituted a mean score of 3.04 with corresponding Standard Deviation of 0.184. In item 5, a mean of 3.18 with corresponding Standard Deviation of 0.385 was obtained which indicated that when studying the reading for their courses in the classroom, students outline the material to help them organize their thoughts. Lastly, in item 6, a mean of 3.17 with corresponding Standard Deviation of 0.377 was obtained which indicated that when studying for their courses, students go through the readings and their class notes and try to find the most important ideals.

The findings of the study corroborated the position of Phan, Phuong and Ho (2019) who in a study focused on the role cognitive factors play in improving the educational quality provided to English Language students. The study found that

students of the English Language do possess certain levels of one or both types of intelligence. Some students may find it easy to express their ideas or thoughts in English, to convey topic focused points in their written essays, or simply to use languages and communication as a tool to achieve what they want, such as persuading others, negotiating, or consulting, and these are the ones that have a high power of linguistic intelligence.

The findings of the study further supported a study by Ghee, Ismail and Kabilan (2010) who explores the proficient use of language learning strategies used by

foreign language learners based on genders and achievement groups. This study gives a global sight on the different preferences of language learning strategies used by unlike gender as well as different achievement groups. The findings of the study allow exploring how the learners used different learning strategies to achieve their academic requirements.

Research Question 2

Does cognition have any effect on secondary school students through interruption and redirect of thoughts?

Table 2: Responses to whether cognitive restructuring through interruption and redirect of thoughts has any effect among secondary school students

S/N	Item	Mean	SD	Remark
1	I made simple charts, diagrams, or tables to help me organize course materials in the classroom	3.21	.771	Agree
2	When I study for the courses, I go over my class notes and make an outline of important concepts	3.09	.308	Agree
3	I often find myself questioning things I hear or read in the course to decide if I find them convincing	3.71	.519	Agree
4	When a theory, interpretation, or conclusion is presented in classes or in the readings, I try to decide if there is good supporting evidence	3.55	.257	Agree
5	I treat the course materials as a starting point and try to develop my own ideas about it	3.83	.368	Agree
6	I try to play around with ideas of my own related to what I am learning in the classroom	3.01	.872	Agree
7	Whenever I read or hear an assertion or conclusion in the classes, I think about possible alternatives	3.92	.557	Agree

Total mean = **24.32**

Cluster mean = **3.47**

Table 2 showed the response to whether cognitive restructuring through interruption and redirect of thoughts has any effect among secondary school students towards learning English language. The

cluster mean of 3.47 gotten from the students' responses is greater than the bench mark which is 2.5 (that is, $3.47 > 2.5$). By implication, cluster mean of 3.47 indicated that a greater number of respondents agreed that cognitive restructuring through interruption and redirect of thoughts has effect among secondary school students

towards learning of English language.

In item 1, a mean score of 3.21 with corresponding Standard Deviation of 0.771 was obtained from the analysis. This established the assertion that students made simple charts, diagrams, or tables to help them organize their course materials in the classroom. In item 2, a greater number of respondents agreed that when they study for the courses, they go over their class notes and make an outline of important concepts, and this resulted to a mean score of 3.71 with corresponding Standard Deviation of 0.308. Also, in item 3, a mean score of 3.71 with corresponding Standard Deviation of 0.519 was obtained from the analysis. This equally established significant response that students often find themselves questioning things they hear or read in the course to decide if they find them convincing.

In item 4, most of the respondents held that when a theory, interpretation, or conclusion is presented in classes or in the readings, they try to decide if there is good supporting evidence, and this constituted a mean score of 3.55 with corresponding Standard Deviation of 0.257, which is significant. In item 5, a mean of 3.83 with corresponding Standard Deviation of 0.368 was obtained which indicated that students treat the course materials as a starting point and try to develop their own ideas about it. Also, in item 6, a mean of 3.01 with corresponding Standard Deviation of 0.872

indicated that students try to play around with ideas of their own related to what they are learning in the classroom. Lastly, in item 7, a mean of 3.92 with corresponding Standard Deviation of 0.557 was obtained which indicated that whenever they read or hear an assertion or conclusion in the classes, they think about possible alternatives.

The findings of the study corroborated a study by Adebileje and Akinola (2020) who explored the teaching and learning English as a second language in Nigeria: Examining evolving approaches and methods. The study examined language teaching and learning theories in a bid to consider evolving and appropriate approaches and methods for efficient teaching and learning English as a second language in Nigeria. The study reveals that strategies and methods are evolving especially, in this hi-tech age, to meet such additional needs. Since no one theory or method is the best.

Testing of Hypotheses

Hypothesis 1

H_{01} : There is no significant effect of cognition on second language learning and acquisition among secondary school students.

H_{A1} : There is significant effect of cognition on second language learning and acquisition among secondary school students.

Table 3: Chi Square Analysis of the Effect of Cognition On Second Language Learning and Acquisition Among Secondary School Students

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.461 ^a	1	.001		
Continuity Correction ^b	1.015	1	.002		
Likelihood Ratio	1.425	1	.000		
Fisher's Exact Test				.004	.000
Linear-by-Linear Association	1.451	1	.000		
N of Valid Cases	120				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 12.00.

b. Computed only for a 2x2 table

The result of the analyses in table 3 showed the effect of cognition on second language learning and acquisition among secondary school students. The chi-square test revealed that calculated χ^2 (.001) was less than the significant level at the 0.05. This implies that there is significant effect of cognition on second language learning and acquisition among secondary school students. Hence the null hypothesis was not upheld, while the alternate hypothesis, which stated that there is significant effect of cognition on second language learning and acquisition among secondary school students was upheld. This finding is in line with a study developed by Rahimi and Katal (2011) who portrays that learners who apply cognitive strategies, which is having more consciousness in understanding what they are doing when learning, tend to be the most successful. The finding also supported the position of Yusri, Rahimi, Shah, & Wah (2013) who posited that the use of cognitive strategies is moderate among learners.

Conclusion

Based on the findings of this study, it is evident that students cognition had

significant effect on second language English learning among the L2 learners in Ekiti State. The study established that cognitive strategies were effective in the learning of English as a second language by L2 students and that cognitive restructuring through interruption and redirect of thoughts has momentous effect in learning English language among secondary school students. Summarily, the study concluded that there is significant effect of cognition on second language learning and acquisition among secondary school students.

Recommendations

For a more fulfilling learning process, the study recommended that learners should build up skills that improve their personal learning and assessment, and learn through visual, audio, and kinesthetic media. Learners should endeavour to take numerous detailed note in class during lesson. Learners should consider errors as a necessary aspect of learning and be ready to be corrected.

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