

**The Effect of CALLA–Based Learning
Strategies on Developing Students’
Reading and their Satisfaction towards
English**

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Abstract

This study aimed at examining the effect of the Cognitive Academic Language Learning Approach (CALLA) on developing students' reading skills and their satisfaction towards English. The study adopted a mixed method quasi-experimental design, in which 59 participants from two intact classes from Birzeit University, Palestine were randomly assigned to an experimental or control group. To test the study hypotheses, five instruments were implemented on different intervals during the 14-week treatment utilizing descriptive and inferential statistics to analyze data quantitatively. In addition, the CALLA Language Learning Strategies Reading Questionnaire (LLSR), and interviews were analyzed qualitatively. Main findings revealed that the intervention had a significant impact on developing students' reading skills. Results also showed that there is a positive correlation between the pre-post reading test and the reading component in the international standardized TOEFL ITP/level 2 test. Findings also suggest a strong association between students' reading performance, language development, and the three thinking levels of reading comprehension. Furthermore, substantial gains and statistical differences were revealed when analyzing the interpretive, and critical thinking levels of reading comprehension, thus insignificant differences appeared on the literal level of reading which reveals that the relationship between the three thinking levels of reading

comprehension is non-linear or recursive in nature and it overlaps. Qualitatively, findings from the CALLA (LLSR) questionnaire revealed that the integration of the CALLA cognitive, metacognitive, and social-affective learning strategy awareness and strategy use are essential in developing self-regulation in reading. Therefore, differentiation in reading instruction proved to be effective as it bolsters motivation and creates readiness among students. Furthermore, students from different levels affirmed their satisfaction towards the reading program and its objectives.

Keywords: Learning strategies, CALLA learning strategies, Reading skills, Palestine.

Introduction

Reading is a daily life skill needed to develop our thoughts and abilities to understand nearly every aspect of human life. It is a dynamic global skill that requires competency development among non-English-speaking countries to be able to communicate, transform human activities, values, meaningful ideas, and knowledge in support of global education. As the importance of English is beyond doubt, a challenging responsibility lies on today's English educators to shape students with high English language reading abilities. The purpose is to survive the influential wave of internationalization, and to compete and participate with the global community as active readers.

This importance has been understood by policy makers, especially in the Arab world, where most decision makers began to introduce the teaching of English as a required subject into the school curriculum (Tahaineh, 2010). Over the last decade, there has been a driving movement among Palestinian educational institutions to focus on achieving greater international participation and recognition for academic institutions. For Palestine, internationalization in Higher Education is necessary for engendering communities of Palestinian learners and educators with promising futures to be able to communicate effectively and skillfully with global skills and competences. According to the Palestinian English Language National Team (2015), “by learning English, students will be empowered with the language skills and literacy necessary to become productive workers, and will allow Palestine to capitalize on the experience and linguistic diversity of its graduates in a growing, competitive global market and in the world of global communications.” (English Language Curriculum for Public Schools, p. 6, 2015).

The role of language and reading is a primary constituent on the map of thinking; “A dynamic movement that is central to literacy” (Freire, 1985, p.18). Therefore, as educators, it is necessary to generate a community of active and skilled readers in order to fully access global knowledge by nurturing good habits of reading as an act of thinking and knowing. Per se, creating a community of good readers, and

teaching reading for the purpose of understanding meaning, should be a priority among universities in Palestine. Students need to be able to construct meaning and transfer knowledge to real life situations while using language as a medium of communication.

1.1 The Importance of Reading in Language Learning

The development of reading as a global skill accords with the current vision of education as it improves with the learning and teaching of reading strategies. Paulo Freire explicitly stated that “If we think of education as an act of knowing, then reading has to do with knowing. The act of reading cannot be explained as merely reading words since every act of reading implies a previous reading of the world and a subsequent rereading of the world” (Freire, 1985, p.18). Undoubtedly, Freire breathes life into the process of reading within a context as he considers reading to be a “matter of studying reality that is alive” (p.18).

Reading is a vibrant process that requires the interaction of different mental processes and the intentional use of the four basic skills in language learning and thinking during the process. Therefore, “reading is needed not only as a language skill, but also as a language learning input for other skills to develop” (Ling, 2011, p.1). Currently, there is a growing initiative to lead university students to acquire the 21st century skills that shape their competences as conscious and critical readers in an effort to enhance their ability to actively use language in

real-life situations, contribute as reflective practitioners, and further maximize their navigation for knowledge from various resources as strategic readers. Therefore, focused attention will always be granted to reading strategies and strategy use as a principal theme for research and development.

Surface and Deep Levels of Reading

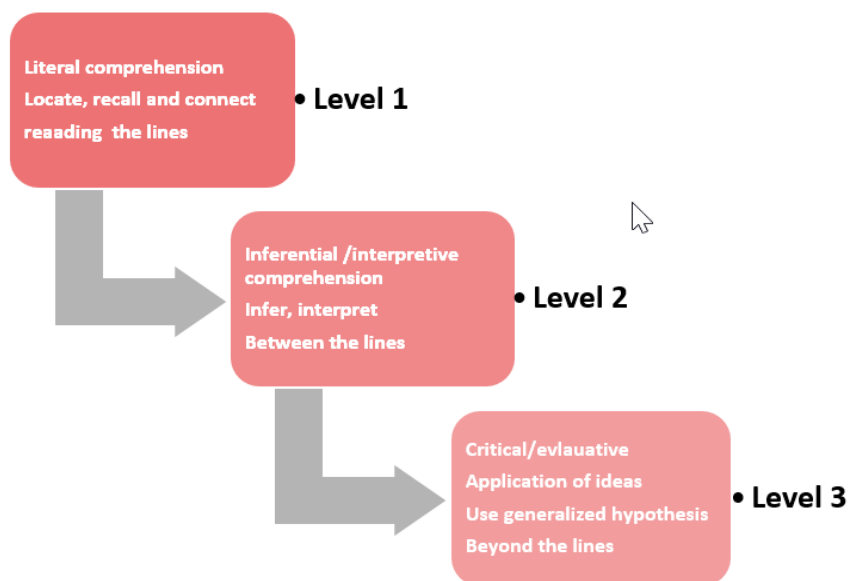
Extensive research has identified a number of cognitive processes involved in the reading comprehension process (Biggs & Tang, 2007). These processes range from surface levels of reading to deeper levels of reading. The general assumption is that the surface levels promote lower level skills whereas the deeper levels promote higher level skills. This implies that reading a text on the surface level means reading rote information without grasping meanings, while reading a text on the deep level requires multiple readings. Teaching deep levels of reading in an interactive way means that the learner is an active thinker who is able to construct meaning, and the teacher is a coach who uses all knowledge resources to maximize the execution of learning strategies. Indeed, the sole purpose in any reading class is to address all levels of reading in a text: from the surface level to deeper levels. This may require multiple readings on behalf of the students which will be investigated in this study. Therefore, teaching for active reading on the surface and deep-thinking levels of reading is vital for shaping the way skilled readers learn as they are required to engage within the different

multi-layered levels of reading comprehension. This is even considered essential and foundational to personal and social well-being.

There are three main classified levels of thinking skills that are stimulated when readers engage in active interaction with the text¹. The three thinking levels of reading comprehension are introduced in Figure 1 as shown below from the least to the very sophisticated level of reading, that is, surface (simple reading) to in-depth, (complex reading).

Figure 1

The Three Thinking levels of Reading Comprehension



¹ Three categorical levels of REQUEST (Ruddel, 2001): adapting Herber's (1978) level of comprehension

The three-level guide presented in Figure 1 was devised by Herber (1978), and further developed by Morris and Stewart-Dore (1984) to help students think while they read. The three levels are: the literal (what is stated), the interpretive (what is implied), and the applied (critical /evaluative thinking). The applied/critical level addresses higher-order thinking skills, taking what was said (literal) and what was meant by what was said (interpretive) and then extending (applying) the concepts or ideas beyond the situation (Ruddel, 2001: adopting Herber's, 1978, as cited in Kabilan, et al., 2010).

Based on the above, and with reference to the researcher's observations on how teaching reading is taught at Birzeit University, there is a need for a hands-on practical evidence to support fostering a culture of teaching reading for understanding within the three thinking levels of reading comprehension. The purpose is to enable students to construct meaning, engage in real-life contexts, and better transfer knowledge in a learner-centered EFL classroom at the university level.

1.2 Rationale: Introduction to the Cognitive Academic Language Learning Approach (CALLA)

A comprehensive approach that directly relates to this research study is called "The Cognitive Academic Language Learning Approach (CALLA)". This approach, which also targets a linguistically diverse classroom, is a strategy-based instructional approach designed by O'Malley and Chamot (1986). CALLA instruction stems from the

cognitive–social learning theory and is therefore learner–centered. It has three main interrelated components that foster and integrate authentic content–area instructional teaching aligned with academic language development activities, and explicit instruction strategy use in reading. In addition, this approach values the student as an active agent who lies at the center of the process of teaching and learning, and can therefore assess how to select a strategy for a certain task, how well a strategy has achieved its planned purpose while monitoring and reflecting during the process to actively transfer the intended strategies to new tasks.

The rationale to specifically select the CALLA–based learning strategies for this study is based on different reasons. Firstly, it is a thorough approach that provides multi–strategy practices and opportunities so that students can use them autonomously by self–regulating their own learning (Chamot, 2004). This approach tends to build on students’ present learning strategies as well. The teacher demonstrates how to use the new learning strategy by modeling, informs students about the strategy to be used, gives the strategy a name, and provides ample practice opportunities and modeling while learning along with scaffolding and directing the students during task implementation. The CALLA–based learning strategies creates a hub for students to cognitively be flexible in exercising a wide range of

reading strategies using authentic material in a learner-centered classroom.

Therefore, one rationale for choosing CALLA-based learning strategies is the importance of being introduced to content subjects using language as a medium of communication, which permeates exposure to all aspects of the curriculum taught at the university level. This is a priority for university students who come from different fields of specialization taught in English. Language use is essential for activities such as scientific experiments, solving problems, synthesizing information in history classes, and writing summaries. Furthermore, students need to experience authentic content to become genuinely strategic in using language while learning. Consequently, learners will be able to construct meaning and transfer knowledge to other real contexts if they are engaged in reading. This process is indispensable for their college studies, and is worth probing into within the context of this study.

Secondly, another rationale for choosing the CALLA-based learning strategies is that it develops academic language skills and use. It is important for students learning English to experience how academic language is used in a variety of disciplines by engaging them in language activities. In addition, CALLA provides explicit and direct instructional techniques and strategies that second language learners can obtain as lifelong skills to compete as competent readers. It is

necessary for students to have conscious control over their learning to be able to deploy challenging tasks (Chamot, 2009).

Thirdly, CALLA-based learning strategies sets a theoretical and philosophical foundation that stems from the social constructivism theory. This enables the researcher to address reading comprehension as a reader-text transaction in a dynamic, cognitive, and interactive process that involves thinking about what one is reading. This is guided by O'Malley and Chamot's (1990) CALLA classifications of the learning strategies which fall into three sub-categories: the metacognitive, cognitive, and social-affective language learning strategies which are pivotal for this study. Chamot clearly states that "in the CALLA classroom, it is important that teachers strive to develop students' own metacognition, as that will help them select the most appropriate strategies for a given task" (Chamot, 2009, p. 58). Therefore, it is crucial for students to learn how to use strategies to achieve tasks. For Chamot, language learning strategies are defined as the special thoughts or behaviors that individuals need to employ to help them comprehend, learn, and retain new information. As such, the researcher finds this classification clear and easy to understand in comparison with other classifications. Further, such classification facilitates the alignment of the thinking levels of reading comprehension during the process of conducting reading tasks.

To conclude, and to the best of the researcher's knowledge, an insufficient number of research studies tackled the empirical implications of reading strategies in the EFL classroom within the context of education in Palestine. Some studies conducted thus far in a Palestinian context are limited in scope, for example, by Shehadeh (2015), who examined the type of reading strategies used by engineering students at the Palestine Polytechnic University in relation to the differences between students' levels. This study investigated the linguistic perspective rather than the pedagogical associations that can be explored in the reading classroom including students' interactions, and the impact of using multiple strategy approach in reading. Presently, there is a demand for studies that seek to investigate and document the practices and implications of a different pedagogical paradigm focusing attention on strategy use such as the CALLA-based learning strategies reading program.

1.3 Context of the Problem

Being a secondary school and a university English language teacher for more than 22 years, the researcher had experienced direct complexities while teaching reading strategies at Birzeit University. There is a research need to address how reading and sub-reading strategies are taught in EFL classes. This is because some teachers have been focusing on the surface level of reading; failing to use the deeper approach and higher-order thinking skills. To explore the

preliminary ambience of the problem in the Palestinian context, three sources were utilized to create a foundation for this study: personal observation, analysis of Palestinian and related studies, and a pilot study.

According to the researcher's knowledge, there is insufficient information addressing the process of the teaching and learning of reading and thinking which limits the ability to advance in this area. Also, a very limited number of studies tackle the function, features, and the impact of the CALLA- based learning strategies approach on developing reading skills among university students in Palestine. This is an area that is neglected in research. Currently, there is a need for studies that document the implementation of a new pedagogical approach in teaching reading in a CALLA learner-centered classroom. Due to this gap, current instructional reading practices at universities in Palestine require more in-depth analysis and research.

Based on the researcher's personal observation, reading strategies used by some teachers in Birzeit University classrooms fall into three main categories: intensive reading, reading aloud, and silent reading. The teaching methodology is also restricted to the surface level of reading and not the deep level of reading. That is, students become passive recipients rather than active readers. Furthermore, and based on the researcher's experience, teaching reading may also cause unease among students, who have different abilities; because they

read without a purpose, which is a hardship for the reader who is unable to distinguish the main ideas from supporting ideas and can't analyze or synthesize. This is confirmed by a study conducted in Palestine by Hajouj (2011) titled, "The Influence of Anxiety on Foreign Language Reading Comprehension and Strategy Use: The Case of Palestinian Tawjihi Students". The study attempted to investigate the influence of anxiety on reading comprehension and strategy use. The study showed that learners have anxiety when reading, and that their performance was ineffective as they failed to construct an understanding of the reading comprehension due to fear and distraction.

1.3.1 Related Regional and Palestinian Studies

It is clear that success at the university level merely relies on existing pre-university characteristics to guarantee the mastery of some fundamental academic skills (Tinto, 1993). These attributes may include reading for writing, oral presentations, critical and creative thinking, problem-solving, and media literacy (Tinto, 1993). Research shows that these skills are very important for academic success, yet professors seldom teach them and they normally take them for granted (Bean, 1996, as cited in Hermida, 2009). In "The Importance of Teaching Academic Reading Skills in First-Year University Courses", Hermida (2009) referred that "most university students today take a

surface approach to reading and learning” (Biggs, 1998, p.58 as cited in Hermida, 2009).

The reality is that university students lack academic reading skills and take a surface approach to reading instead of a meaningful engagement to engender understanding. The surface approach, thus, prevents students from connecting information to real life situations. This leads to surface remembering of material for the sole purpose of achieving grades in exams in isolation from the text, failing to promote understanding or construction of knowledge. This phenomenon occurs because some teachers usually lecture the texts and assess students based on their memorization and retrieval of facts and information delivered in the lectures (Wendling, 2008; Hobson, 2004; as cited in Hermida, 2009). Therefore, and in order to teach long-life skills and create cognitive flexibility while reading, it is important to foster a deeper approach to creating sense making where readers are capable of using higher-order cognitive and metacognitive skills such as the ability to analyze, synthesize, solve problems, and negotiate meaning with the author to further be able to read critically beyond the text. Such good practices in teaching reading are missing in some Palestinian EFL classrooms, including university classrooms.

In Palestine, and despite the awareness of the challenges associated with EFL university students’ reading abilities, there has been a gap in research and lack of efforts in exploring the process of reading as

a thinking tool. To the researcher's best knowledge, there is scarcity of research addressing the improvement and pedagogical challenges using the surface and deep levels of thinking while reading which is of paramount importance nowadays.

Some recent Palestinian studies indicate that many Palestinian universities strive to focus on developing their students' English language proficiency in all language skill areas. Students at the undergraduate level encounter many challenges when they are asked to read materials and textbooks in English. This is confirmed by a study conducted by Bianchi and Hussein-Abdel Razeq (2017) "The English Language Teaching Situation in Palestine" asserting the fact that there is a continuing dissatisfaction with the overall performance and proficiency in English among Birzeit University students and graduates. This, according to the authors, suggests absence of a fundamental interpretation of English language needs, benchmarks of curriculum design, variety of assessment tools, methodology, and learning strategies at the university level. This dissatisfaction is also expressed by managers and employers in the workplace (Bianchi & Hussein-Abdel Razeq, 2017).

In a study titled "Language Learning Strategy Use in Palestine," Shmais (2003) reports on the current English language learning strategies used by Arabic-speaking English majors enrolled at An-Najah University in Palestine. She investigated the frequency of

strategies used among these students according to gender and proficiency variables reflected by students' learning level. Results of the study showed that gender and proficiency had no significant differences on the use of strategies. Based on these findings, the researcher recommended that training and guidance should be granted for using cognitive, memory, and compensation strategies, by embedding them into regular EFL classroom activities.

To conclude, recent research on reading in Palestine indicates a lack of satisfaction in reading for understanding among university students. In Palestine, EFL students who struggle with reading often demonstrate little knowledge and awareness of the different reading strategies involved. Students have difficulty with lower-level skills (e.g. skimming, scanning, context clues), as well as the higher-level skills (e.g. making predictions, inferences, connections, and synthesizing). Educators notice weaknesses in students' receptive skills in English, despite the great amount of time dedicated to improving reading strategies and instruction in a pedagogical manner. Educators and teachers complain that the majority of university students in Palestine fail to reach a pleasing level in English after learning the language for more than 12 years.

1.3.2 Pilot Study

To confirm the need to conduct an in-depth research regarding the poor performance of students' reading at the university level, the

researcher conducted a pilot study on a sample of 30 students during the summer of 2017 at Birzeit University. A reading questionnaire was distributed for the purpose of collecting information about the different strategies students use when they read in English. The Survey of Reading Strategies (SORS) was adapted from Mokhatari and Sheorey's study (2002) "Measuring ESL Students Reading Strategies." This survey categorizes reading strategies into three levels: global, problem solving, and support strategies to assess students' awareness of reading strategy use at the EFL intermediate level. It is intended to measure meta-cognitive awareness and perceived use of reading strategies.²

The pilot study was implemented on a sample of 30 students who were studying intermediate English at Birzeit University. They came from different backgrounds and fields of study. They studied the "Unlock Cambridge Series" for reading and writing based on the

² **The global reading strategies (GLOB)** are those intentional, carefully planned techniques by which the learners monitor or manage their reading such as having a purpose in mind, previewing the text, organization, or using typographical aids and tables and figures (13 items).

Problem Solving Strategies (PROB) are the actions and procedures that readers use while working directly with the text. These are localized, focused techniques used when problems develop in understanding textual information; examples include adjusting one's speed of reading when the material becomes difficult or easy, guessing the meaning of unknown words, and rereading the text to improve comprehension (8 items).

Support Strategies (SUP) are basic support mechanisms intended to aid the reader in comprehending the text such as using a dictionary, taking notes, underlining, or highlighting textual information (9 items).

Common European Framework of Reference for Languages (CEFR).³ Results of the sample study indicated that learners scored below the average with low results in global reading strategies (between low and very low), especially for questions 3, 4, 6, 8, 15, 17, 20, 21, 23, 24 and 27. These questions reflect their lack of analysis and critical thinking, using context clues, making connections to prior knowledge, and understanding the text while reading. Further, they were not able to carefully plan their techniques despite the fact that some of them do have a purpose in mind when they read. Therefore, they do have reading difficulties that are closely associated with their proficiency. However, the results for the problem-solving strategies and support reading strategies indicated that they scored average results, which signified that they were somehow aware and conscious of their need to understand the reading, yet they were unable to neither monitor their reading nor paraphrase ideas to better understand the text. Further, the mean score for all strategies is between 3.2 and 3.5 (I do this only occasionally / I sometimes do this about 50% of the time) on a Likert scale from 1 to 5. This means that students' ability to read is below average especially in the global strategies.

³ The common European Framework of Reference for Languages: learning, teaching, assessment (CEFR) was officially adopted as the reference framework for English language education at Birzeit University, starting with the coming academic year 2016/2017.

Based on the results of the pilot study, there is a need to pursue the issue with further investigation and conduct a study to advance the teaching of reading strategies using CALLA-based learning strategies as an instructional program due to its direct focus on metacognitive, cognitive, and social-affective learning strategies. The researcher opted to use CALLA in order to help learners progress in reading, gain awareness of appropriate reading strategies, and to employ the three thinking levels of reading comprehension (literal, interpretive, and critical) in a learner-centered classroom.

1.4 Statement of the Problem

Based on the aforementioned, it can be stated that Palestinian university students have poor reading performance which hinders them from becoming active readers. The researcher had recognized students' poor use of reading strategies based on her personal observation, experience, and the pilot study implemented which might indicate lack of ability due to a poor foundation in the language from their schooling years. This gap was further revealed as they do not possess appropriate learning strategies when reading.

1.5 Research Questions

This study sought to answer the following main question:

What is the effect of CALLA-Based learning strategies on developing Palestinian students' reading and their satisfaction towards learning English?

To answer the major question, the following sub-questions were answered:

1. What are the problems Palestinian university students encounter when reading?
2. To what extent are Palestinian university students aware of the different reading strategies as they are engaged in reading?
3. What is the relationship between the three thinking levels of reading comprehension and the types of reading strategies used?
4. What are the features of a program based on CALLA to enhance overall students' reading skills?
5. To what extent are students satisfied with CALLA and its effect on their reading performance?

1.6 Instrumentation

The current study adopted the control– group quasi–experimental research design, in which two intact classes from Birzeit University, Palestine were randomly assigned to an experimental or control group. Data were analyzed both qualitatively and quantitatively to verify the study hypotheses. Five quantitative and qualitative instruments have been selected by the researcher to test the study hypotheses. They were infused into the different stages of the research study for both the experimental group and the control group. These instruments include:

- 1. The CALLA Language Learning Strategies Reading Questionnaire (LLSR).**

2. Pre-and post-Reading Test.
3. Pre-and post TOEFL ITP level 2 Standardized Test.
4. The Satisfaction Scale.
5. Interviews.

1.7 Hypotheses of the Study

1. There will be statistically significant differences in the reading pre-test and post-test mean scores of the experimental group on the overall reading skills in favor of the post-test.
2. There will be a positive statistical correlation between the pre-test and post-test reading component of the TOEFL ITP level 2 & the pre-and post-reading test in favor of the experimental group.
3. There will be qualitative differences via percentages in the CALLA Language Learning Strategies Reading Questionnaire (LLSR) and interviews in favor of the post-application of the experimental group.
4. There will be statistically significant differences in the mean scores of the three thinking levels of reading comprehension (literal, interpretive, and critical) in favor of the post-reading test of the experimental group.
5. There will be a relationship between students' reading performance and the three thinking levels of reading comprehension (literal, interpretive, and critical) in favor of the experimental group.

6. Based on the satisfaction scale, students in the experimental group will be satisfied with the new CALLA-based learning strategies reading program.

1.8 Variables of the Study

1. Independent Variable

- Implementation of the CALLA-based learning strategy classification for O'Malley and Chamot (1986;1990); Chamot (2008) with one experimental group.

2. Dependent Variables

- The development of the experimental group's performance on the overall reading post-test.
- The satisfaction of the experimental group with reading after the implementation of the CALLA reading program.

1.9 The Purpose of the Study

The study aimed at investigating the impact of CALLA-based learning strategies on developing Palestinian university students' reading and their satisfaction towards English at Birzeit University. The current study aimed at:

1. Developing the reading skills of Palestinian university students in the ENGC 233 course at the Faculty of Arts –Birzeit University, Palestine.
2. Identifying and exploring the language learning strategies and the different thinking levels of reading required for Palestinian university

students in the ENGC 233 course at the Faculty of Arts –Birzeit University, Palestine.

3. Designing an instructional CALLA-based reading program to be implemented with the experimental group only.
4. Investigating the effect of the CALLA-based reading program on developing the overall reading skills, and on students' performance with reference to the three thinking levels of reading comprehension.
5. Investigating students' satisfaction with the CALLA-based reading program.

1.10 Significance of the Study

It is hopeful that this current study might be of significance to a community of learners and practitioners including students, instructors, and policy makers.

A. Students

It is hopeful that this study could:

1. Raise students' awareness to the importance of the sub-reading and overall reading skills for their future.
2. Motivate students to re-read more than one time using the three thinking levels of reading.
3. Promote cooperation, respect, and good citizenship during the process of collaborative reading.

4. Create a community of learners who are active agents of change as competent readers.
5. Grant students the opportunity to address higher-order thinking skills, and be able to self-regulate and reflect on their own learning.

B. Instructors

It is hopeful that this study could:

1. Guide teachers through the pedagogical process of reading and discussing factors that contribute to the development and success of assisting learners to become active readers.
2. Introduce teachers to the three thinking levels of reading comprehension as a milestone in improving reading abilities and performance.
3. Highlight the prominence of reading skills and how it is taught in the classroom.
4. Introduce the CALLA reading program that might propose guidelines for EFL teachers to enhance their students' proficiency in reading.
5. Increase educators' and teachers' awareness of recent trends of teaching English as a foreign language.

C. Policy makers

It is hopeful that this study could:

1. Create a community of practitioners who are able to document good practices in teaching reading to further promote effective reading

habits in the community and among students in schools and universities.

2. Structure and design ongoing professional development training seminars for educators and teachers to promote the importance of nurturing active readings programs.
3. Contribute to the body of EFL educational knowledge for the purpose of mapping a bottom-up grass rooted strategic plan as part of internationalization in higher education.
4. Provide textbook designers and test-developers with research that contributes to the need to involve the three thinking levels of reading as part of their assessment, and in coordination with policy makers.
5. Grant focused attention to a significant and needed trend in EFL instruction; CALLA, which has not so far received any attention from local educational institutions in Palestine.
6. Emphasize the close link between CALLA and the three thinking levels of reading comprehension, contributing in overcoming reading difficulties and creating a culture of reading for understanding in a learner-centered classroom at Birzeit University, Palestine.

1. 11 Delimitations of the Study

A number of delimitations need to be addressed and acknowledged regarding the present study. The current study is delimited to:

- An experimental and control group consisting of fifty–nine students in the Faculty of Arts at Birzeit University, Palestine.
- Birzeit University ENGC 233 English through Current Issues course is only offered by the Department of Languages and Translation.
- Conducting the study on Birzeit university students who come from different specializations to study general English, and major in English with a minor in Translation.
- Implementing the CALLA reading program in the second semester of the academic year 2018/2019 for the duration of 14 weeks only.

1.12 Research Procedures

The current study was conducted during a twelve–week period with a three– hour session a week excluding the two weeks for the preparation and the time allocated for the implementation of the pre– and post– tests and other instruments. The treatment started from February 4th, 2019 till May 16th, 2019. Therefore, the reading program lasted for 36 hours of teaching; every Tuesday and Thursday for 12 weeks. The total number of hours including the pre–post instruments implemented was 42 hours (14 weeks). In the spring semester of 2019, the researcher was granted permission from the chairperson of the Department of Languages and Translation and the registrar office to conduct the study on two intact ENGC 233 English Through Current

Issues randomly assigned classes: the experimental group and the control group.

Other procedures were undertaken which included prior consultations related to investigating the appropriateness of selecting the ENGC 233 English Through Current Issues course with other instructors, and their opinions about the reading strategies needed to develop this course. Later, procedures regarding the selection of the research design and instrumentation, program construction and objectives were fully explored. Finally, some administrative decisions were also implemented including taking permission and consulting the University administration and AMIDEAST to administer the pre-post TOEFL ITP level 2 test on the university premises. Consequently, a series of actions were followed in this current study, including a review of related literature about reading skills and strategies in the EFL classroom, the CALLA-based learning strategies approach to determine the classification of learning strategies as adopted by O'Mally and Chamot originally developed (1986) , review of the three levels of reading comprehension as suggested by Herber's (1978) level of comprehension namely the literal, interpretive and critical thinking levels of reading comprehension.

A pre-posttest design was executed to investigate whether there was any transformation in performance after carrying out the treatment on the experimental group. The Pre-test was administered

to all 59 participants in accordance with the pre TOEFL ITP level 2 international standardized test during the second week to determine the participants' existing level before administering the CALLA reading program, respectively with the pre-application of the CALLA Language learning reading strategies questionnaire (LLSR). An immediate posttest was administered in week fourteen to test the sample's performance in the overall reading skills upon completion of the treatment, the satisfaction scale, and application of the semi-structured interviews. The scores of the pre-posttest were compared and statistical analyses were conducted using SPSS, while the results of the (LLSR) questionnaire were analyzed qualitatively via percentages. Furthermore, the satisfaction scale was analyzed quantitatively via SPSS while the semi-structured interviews were analyzed via thematic coding. Furthermore, a series of procedures were also followed in this current study addressing the setting, duration of the experiment, program planning and construction prior to the treatment.

1.13 Results

Hypothesis One

Hypothesis one states that *“there will be statistically significant differences in the reading pre-test and post-test mean scores of the experimental group on the overall reading skills in favor of the post-test”*. To test the first hypothesis, descriptive statistics (mean score M

& standard deviation SD) and inferential statistics (t-test and Effect size) were performed.

Results of the overall reading skills in the reading test were in favor of the experimental group as they considerably improved in the post-reading test. Therefore, the researcher verifies hypothesis one because the mean scores of the experimental group were significantly higher than the mean scores of the control group in the post-reading test (Table 1).

Table 1

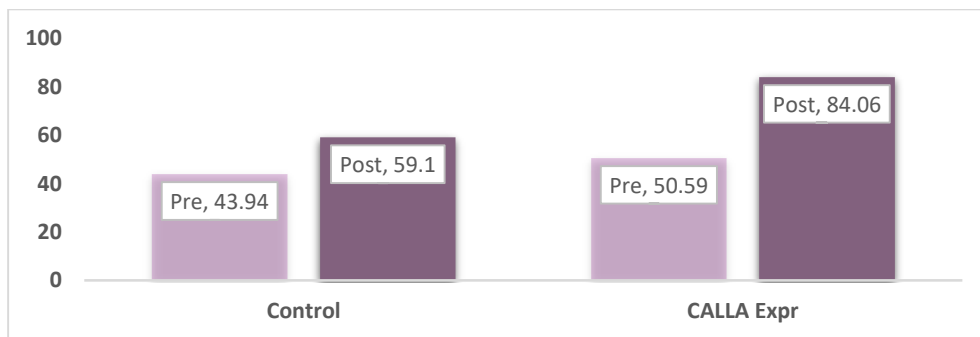
The Pre-and Post-Reading Test Results for the Experimental and Control Groups

Question	Type of group	Pre			Post		
		N	Mean	SD	N	Mean	SD
Reading Test	Control	26	43.94	8.61	26	59.10	7.42
	CALLA Expr	33	50.59	13.48	33	84.06	6.08

Note. The Reading Test was developed by the researcher specifically for this study. A Summary of the mean Reading Test scores of the control and the CALLA experimental group showing the number of participants (N) and the standard deviation (SD) before and after the Reading Test.

Figure 1

The Pre-and Post-Reading Test Mean Scores for the Experimental and Control Groups



To verify the first hypothesis, further analysis of the correlation between the pre-and post-experimental reading exam, Pearson's correlation is ($r=0.481$). This means that the association between the two variables is positive in linearity. Thereafter, the correlation coefficient is significantly different from zero ($P<0.05$). The calculated effect size proved to be **2.863**, which is a "Huge" effect size (Cohen, 1988). This indicates that the CALLA-based learning strategies reading program was effective in developing students' reading performance.

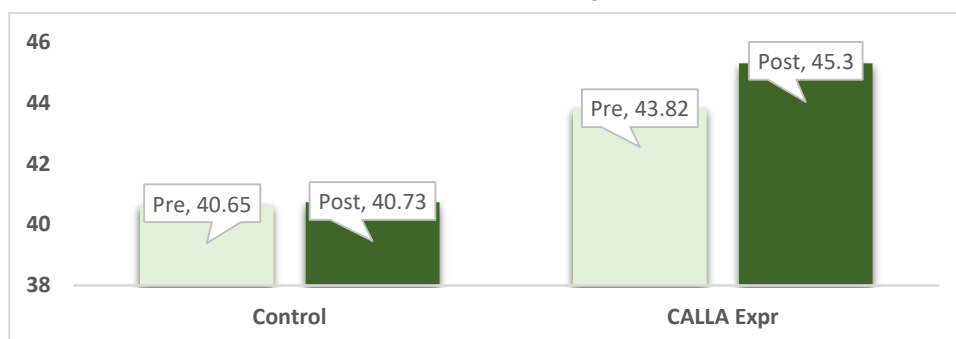
Hypothesis Two

Hypothesis two states that "*there will be a positive correlation between the pre-test and post-test reading component of the TOEFL ITP level 2 test & the pre-and post-reading test in favor of the experimental group*". To test the second hypothesis, descriptive

statistics (Mean M & Standard Deviation SD), and Pearson's correlation (r) were performed. Results obtained show that there is a positive correlation between the pre-test and post-test TOEFL ITP/level 2 reading component & the pre-and post-reading test. Therefore, the researcher verifies the second hypothesis (Figure 2):

Figure 2

Comparison between the TOEFL ITP level 2 (Reading Component) for the CALLA Experimental and Control groups



Hypothesis Three

Hypothesis three states that *“there will be qualitative differences via percentages in the CALLA Language Learning Strategies Reading Questionnaire (LLSR) in favor of the post-application for the experimental group,”*. To test the third hypothesis, a qualitative analysis via percentages was performed. Results of the data indicate that the overall CALLA Language Learning Strategies Reading Questionnaire (LLSR) were in favor of the experimental group

as they markedly progressed in the post-application from 69% to 87% respectively. Therefore, the researcher verifies the third hypothesis.

Table 2

Mean Percentage of the Pre-and Post-CALLA Language Learning Strategies Reading Questionnaire (LLSR) for the Experimental Group vs Control Group.

16 Questions	Type of group	Pre		Post	
		N	Mean %	N	Mean %
AVERAGE (ALL Questions)	Control	28	0.75	26	0.75
	CALLA Expr	35	0.69	33	0.87

Note. The 16 Questions of the CALLA Language Learning Strategies Reading Questionnaire (LLSR), were adopted from the CALLA Learning Strategies Handbook, p.72. However, the number (N) of participants in the pre-application were more than the number of participants in the post application due to the withdrawal of four participants after conducting the pre-application.

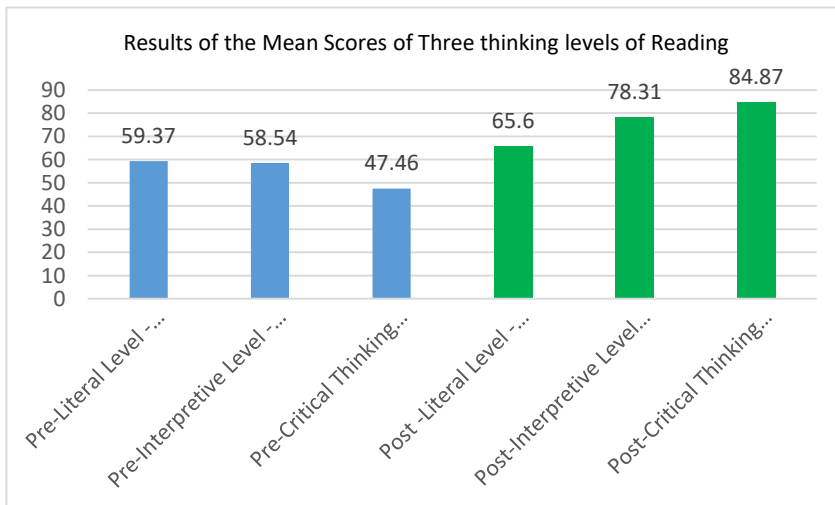
Hypothesis Four

Hypothesis four states that *“there will be statistically significant differences in the mean scores of the three thinking levels of reading comprehension (literal, interpretive, and critical) in favor of the post-*

reading test of the experimental group”. To test the hypothesis, descriptive statistics (Means M and Standard Deviation SD), and inferential statistics (t-test, paired sample correlation and paired sample test) were performed. Results obtained from the data indicate that there are statistically significant differences in the reading pre-test and post-test mean scores of the experimental group in the interpretive and critical thinking levels of reading in favor of the post-test while in the literal thinking level of reading comprehension there were some observed differences, yet they were not significant. Therefore, hypothesis four was not completely verified as the literal level of reading comprehension marked no significance.

Figure 3

Comparison of the Pre-and Post-Reading Test Mean Scores of the Three Thinking Levels of Reading Comprehension for the Experimental Group



Hypothesis Five

Hypothesis five states that “*There will be a relationship between students’ reading performance and the three thinking levels of reading comprehension (literal, interpretive, and critical) in favor of the experimental group*”. To test the fifth hypothesis, Pearson correlation (r) and regression analyses were performed. A thorough investigation using Pearson’s correlation and regression analyses indicate that there is a relationship between students’ reading performance, and the three thinking levels of reading comprehension (literal, interpretive, and critical) in favor of the experimental group. This in turn verifies the researcher’s fifth hypothesis.

Hypothesis Six

Hypothesis six states that “*based on the satisfaction scale, students from the experimental group will be satisfied with the new CALLA-based learning strategies reading program*”. To test the sixth hypothesis, descriptive analysis of the satisfaction scale was performed using the SPSS program by calculating the mean scores (M), and standard deviations (SD) for each of the four sections containing the 19 questions: learner–content, learner–instructor, learner–learner, and general satisfaction. The overall results indicate that the average mean score (M) for all four sections was (4.41) which reveals a high degree of satisfaction in accordance with the *5-point Likert Scale Key* as

shown in Table 3. Therefore, the researcher verifies the sixth hypothesis.

Table 3

Overall Descriptive Statistics Mean Sores of the Satisfaction Scale Sections

	N	M	SD
Section A–Learner–Content–Satisfaction	33	4.37	.48
Section B–Learner–Instructor–Satisfaction	33	4.58	.40
Section C–Learner–Learner–Satisfaction	33	4.19	.53
Section D–General–Satisfaction	33	4.53	.48

Note. N= number of participants= mean score; SD= Standard deviation of each group's satisfaction with an overall average of 4.41.

Finally, students' responses in the semi-structured interviews reveal that the CALLA reading program had a significant effect on students' level of awareness of the various reading strategies, motivation, self-regulation, and overall satisfaction with the program.

1.14 Summary of the Overall Results

The results of the study revealed that there were noticeable differences in the overall reading strategies in favor of the experimental

group as demonstrated in the pre–and posttests. Main findings also show that the intervention of the CALLA–based learning strategies reading program had a considerable impact on developing students’ overall reading skills, and was linked to statistically significant gains in reading. Quantitative results indicate that, in the experimental group, there were statistically significant differences in the reading test in favor of the post–test. Results also showed that there is a positive correlation between the reading test and the reading component in the international standardized TOEFL ITP/level 2 test.

Findings also suggested a strong association between students’ reading performance, language development, and the three thinking levels of reading. Furthermore, substantial gains and statistical differences were revealed when analyzing the interpretive, and critical thinking levels of reading, thus insignificant differences appeared on the literal level of reading which shows that the relationship between the three thinking levels of reading comprehension is non–linear in nature. Qualitatively, findings from the CALLA language learning Strategies reading questionnaire (LLSR) reveal that the integration of the cognitive, metacognitive, and social–affective strategy awareness and strategy use are essential in developing self–regulation in reading. Therefore, differentiation in reading instruction proved to be effective as it bolsters motivation and creates readiness among students. Furthermore, students from different levels (pre–intermediate,

intermediate, and advanced) affirmed their satisfaction with the reading program and its objectives.

1.15 Discussion and Interpretation of Findings

As revealed from the results, it can be stated that the intervention of the suggested CALLA–based learning strategies reading program had a positive effect on the development of the overall reading performance in favor of the experimental group. Indeed, this was verified in the first hypothesis which approved that the combination of the three thinking levels of reading comprehension (literal, interpretive, and critical) merged with the CALLA metacognitive, cognitive, and social–affective reading strategies in a cooperative learning environment optimized students’ reading abilities to perform as good readers.

The quantitative statistical analysis of the first hypothesis indicate that the magnitude of Cohen’s effect size was 2.863 which is considered huge. This in turn shows that students did benefit from the reading program which bolstered their desire and readiness to engage in purposeful and meaningful contexts while reading. Consequently, it can be concluded that the program was immensely successful due to several features that stemmed from the original CALLA’s philosophy guided by social constructivism emphasizing that all students are able to learn when they are aware of their own learning process and preferences. This impact was also approved in

the sixth hypothesis of the satisfaction scale .The factors of success were attributed to the sequential CALLA–learning strategies guidelines and lesson organization, the practical pedagogical approach and adaptability of introducing and describing learning strategies as motivational flexible strategies ,exposure to metacognitive understanding or reflecting on one’s thinking and learning which is a hallmark in social constructivism , compliance to constructing authentic content in a socially situated environment, direct and explicit strategy instruction methodology , and definitely the infusion of the three thinking levels of reading aligned with the CALLA strategies in a cooperative learning environment. These factors appropriated students’ reading strategies from all levels (beginners, intermediate, and advanced) while maintaining students’ motivation to learn, and it enabled them to differentiate and self–regulate their own learning during the process of active reading.

As such, the substantial improvements achieved and approved in the first hypothesis as reflected in the results of post– reading test for the experimental group, respectively from (M=50.6) to (M=84.1) indicate that students were able to overcome the problems that surfaced in the pre–reading test. Furthermore, a comparison between the standard deviation (SD) scores in the post–reading test decreased from (SD= 13.48) to (SD=6.08) respectively indicates that using collaborative reading and reciprocal teaching decreased the

differences among students which in turn reveals the interconnection and understanding that reduced their anxiety, and increased their motivation. Henceforth, using cooperative learning creates a hub for positive reading and promotes self– efficacy.

1.16 Main Findings

1. The non–linear infusion & intentional overlapping of both surface and deep levels of reading for understanding advances reading performance
2. Awareness of the multiple strategy use of the CALLA (metacognitive, cognitive, and social/affective) engenders self–regulation, and the use of collaborative strategic reading advances reading skills.
3. Cooperative Learning nurtures intrinsic reading and reading performance.
4. Collaborative reading enhances multiple strategy use.
5. Differentiation improves reading instruction, performance, and promotes equity.
6. Implementing the instructional CALLA–based learning strategies reading program developed students’ reading skills, thinking skills, and social skills.

1.17 Conclusion

This study exemplified that the teaching of reading using the CALLA–based learning strategies reading program flourishes in a

constructivist classroom that incubates the three levels of understanding while reading in a dynamic and recursive nature, and that, assimilating the metacognitive, cognitive and social affective/skills with cooperative learning aided Palestinian learners in improving their reading performance, and in creating a positive attitude towards reading. Also, the CALLA strategies can merely be fully effective to introduce both lower and higher thinking order skills in a cooperative learning environment attaining to the different levels of reading.

The use of the CALLA-based learning strategies reading program is in line with most of the recent approaches conducted in language learning. The CALLA-reading program and its content designed specifically for this study enabled students to become good readers who can use resourceful task-appropriate and flexible strategies as they were mentally engaged in active and strategic reading using academic and non-academic reading texts. Furthermore, students were capable of transferring these strategies to new context and other courses using self-regulation in a reading classroom that employed differentiation to accommodate their needs. The results also indicate that reading requires awareness on behalf of the reader (activated knowledge, purpose, and goals); and that reading with meaning requires responses to different levels of thinking in a recursive manner within the broader context of social and cultural

context.

Finally, this study confirmed that using cooperative learning in reading reversed many misconceptions about reading, and shaped humanistic values among students as good citizens who can introduce new perspectives within a community of readers. This experiential learning process development not only students' cognitive and instrumental abilities in using cooperation, negotiations and decisions making skills, but also planning, self-management, and resilience. They also gained social dimensions including respect for diversity, empathy, participation, and engagement. Finally, there was a change in perspective as reading was interpreted as a motivating, meaning-constructive process. Therefore, the CALLA-based learning strategies reading program proved to be a distinguished paradigm that needs to be cultivated by opening our classrooms to constructivist practices as opposed to the conventional methods of teaching especially in reading.

1.18 Pedagogical Implications

Pertinent to the findings revealed through the qualitative and quantitative analyses of the present study, a number of pedagogical implications imply the need to advocate the aim of this study for a wider community of learners and practitioners both on the institutional level and with our learners.

A preliminary step commences with raising students' awareness to the importance of reading for understanding; a meaningful progression needed for their global scholarly success. Students also need to recognize the aesthetic value of reading. Good readers need to know what to do when they encounter difficulties. They need to learn how to enjoy and appreciate texts, relate texts to self, and respond sensitively to texts with diverse social, historical, and cultural dimensions.

At the institutional level, there must be a change in perspective and vision among curriculum designers in particular at the Faculties of Education partly within their strategic national and institutional goals to prioritize the skill of reading and thinking. One alternative is to design an independent reading course for university students from all disciplines to exercise the three thinking levels of reading as a milestone in a healthy learner-centered reading classroom. Furthermore, test-developers need to incorporate the three thinking levels of reading as part of their assessment tools. Finally, initiate continuing professional development (PD) programs that tackle pedagogical practices related to teaching differentiation in reading instruction, re-visiting the principles and classroom practices in language assessment, teaching the CALLA sequential lesson planning process that promotes the equal prominence of employing both the higher and lower thinking levels of reading, and E-assessment to

enable change in perceptions, and self-improvement among teachers via reflection , networking , and action research.

1.19 Recommendations

Upon the completion of the present study, the following recommendations are considered necessary on the micro and macro levels:

1. Utilize differentiation as a successful instructional reading pedagogical practice.
2. Introduce both metacognitive and cognitive learning strategies to students with different abilities directing attention to the literal level of reading comprehension as a hub for raising curiosity and creativity.
3. Stimulate motivation using social/affective skills to promote reading.
4. Prioritize applying modeling, summarization, activation of prior knowledge, reflection, and reciprocal teaching and questioning as gateways to successful reading.
5. Enhance emotional scaffolding and metacognition to promote positive self-talk and intrinsic motivation.
6. Address misconceptions related to the teaching of reading by offering professional developmental growth programs.
7. Promote good thinking by introducing the three thinking levels of reading for understanding.

8. Utilize the three thinking levels of reading comprehension as a framework for creating adjustments while planning intended learning outcomes (ILO's) and objectives to introduce authentic content in reading classrooms.
9. Grant more opportunities to reflective professional development using hands-on practices related to the teaching of cognitive, memory, and compensation strategies, and further to incorporate these activities via blended learning programs and E-assessment.
10. Promote the execution of cooperative learning models by offering professional training and E-learning online courses to guide teachers on how to use the Johnsons model of cooperative learning in its various types.
11. Tailor real-life classroom practices that address humanistic values such as social and leadership skills in order to create a community of readers who value equity and equality in teaching and learning.
12. Encourage test-developers to incorporate the three thinking levels of reading in their assessment procedures to evaluate students' reading literacy.
13. Ensure that curriculum developers align their overall goals and ILO's with reading skills to reflect the desired progression and cognitive development of learners with different abilities.

1.20 Suggestions for Further Research

For further research, it is recommended that a similar longitudinal study be carried out on a larger sample addressing different Palestinian universities to be able to generalize the results and gain more benefits. It is also recommended to conduct the study on students in schools in order to examine the effect of the CALLA-reading program on a different sample and further compare results. It would also be helpful to capture qualitatively, and with an in-depth exploration, the experiences and perspectives of students after implementing CALLA on other skills too. In addition to providing professional development for teachers addressing humanistic values such as social and leadership skills to support fostering a culture of teaching and learning. In this changing and challenging world, CALLA is a possibility, and an entrance to a learner-centered classroom. It is hoped that CALLA digital online courses be designed with a teacher manual as a reference, and another one for students to promote reading practice exercises, and relevant references. Finally, CALLA empowers students with the needed knowledge, strategies, and techniques to be autonomous and independent in order to use language effectively and academically develop.

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