The Implementation of Cognitive Academic Language Learning Approach-based Elena:
An analysis of introduction to linguistics course

Frimadhona Syafri1,2,*
1Language Education Postgraduate Program
Universitas Negeri Jakarta, 2Universitas Negeri Semarang
Jakarta, Indonesia, Semarang, Indonesia
*Frimadhona_lt15s3@mahasiswa.unj.ac.id, frimadhona@mail.unnes.ac.id

Zainal Rafli, Emzir Emzir
Language Education Postgraduate Program
Universitas Negeri Jakarta
Jakarta, Indonesia

Abstract—Introduction to Linguistics is one of compulsory subjects that are available in English Department, Universitas Negeri Semarang (UNNES). To enhance the learners in learning linguistics concepts, it is necessary to implement Cognitive Academic Language Learning Approach (CALLA) model by using a technical tool that is called Electronic Learning Aid (ELENA). It is Learning Management System (LMS) that available in UNNES to support e-learning. Researches show CALLA Model that the Cognitive Academic Language Learning Approach (CALLA) strategy has contributed to the improvement of learners' reading comprehension performance. Moreover, LMS can support educational institutions to make the right and best choice among the available e-learning platforms [1]. This paper is aimed to analyze Cognitive Academic Language Learning Approach (CALLA) model by using ELENA for Introduction to Linguistics. This research method is a descriptive analysis. The subjects of the study were learners in fourth semester 2017/2018 in English Department in Universitas Negeri Semarang. The result of the study shows that the use CALLA-based ELENA can provide the learners’ comprehension in learning Linguistics concepts. Further, that model has emerged as one of the alternative modes of instruction delivery in Introduction to Linguistics.

Keywords—analysis study; Cognitive Academic Language Learning Approach (CALLA); Electronic Learning Aid (ELENA); introduction to linguistics

1. INTRODUCTION

Understanding of Linguistic concepts becomes the main foundation for learners to study Linguistic-oriented courses for higher levels. In line with the report of Seminar on Evaluation of Linguistic Teaching in Higher Education compiled by Kridalaksana that Introduction to Linguistics Course aimed to learners have basic knowledge about the nature of language, its function, and its relation with other sciences [2]. This course, in addition to providing a basis for further study in Linguistics, also provides sufficient insight into the field of Linguistics for those interested in other disciplines. However, based on analysis in preliminary studies through observation, interview, and questionnaire towards learners of English education program semester 2016/2017 who have followed the course of Introduction to Linguistics, it was found that to understand the concept of Linguistics is hard. Similarly, Widyastuti and Andriyanti stated that learning linguistic terms are obstacles for learners in understanding the basic concepts of Linguistics found in various Linguistic branches [3]. Furthermore, learning linguistics concepts is the same as learning academic language. Albashwani, Paramaswari, and Manjet stated that “Learning the academic language in addition to the content areas knowledge simultaneously form a challenge to the learners” [4]. Similarly, Chamot & O’Malley, also provide “academic reading relies heavily on the academic language which is distinguished by its formality, difficult vocabulary, precision and concision, and its structures” Related to it, the instructors have to consider and to come up with solution to help learners in comprehension of linguistics concepts [5]. One of solutions is by using Cognitive Academic Language Learning Approach (CALLA) model. Nejad and Masoud Mahmoodi note that “there was also a significant positive relationship between the use of CALLA and the learners’ reading comprehension performance” [6]. According to Chamot and O’Malley, learners therefore may need ways to link important concepts as much as they need accurate information based on a scientific view of the world [5]. For these reasons, this study focused on implementing CALLA as an approach in Introduction to Linguistics course.

To maximize teaching learning process, online activities also can be used to either reinforce learning undertaken in the classroom, or they can serve as a basic introduction to topics before they are covered in more depth in class. For e-learning with online internet base approach provide more easily developed in online mode of teaching. For learners, they not only learn from the teachers, but also learn from many sources unlimitedly. So they can increase their knowledge beyond what just teachers had given [7]. Considering the utility of e-learning, the writer combined CALLA model and technological tool that is named Electronic Learning Aid (ELENA) for introduction to linguistics course.

The use of CALLA based on ELENA in Introduction to Linguistics classes very essential. It will not only help to make the teaching and learning of Introduction to Linguistics to share in educational revolution which e-learning brings into
educational system but also to tap the benefits of a more effective method of teaching and learning. The efficacy of ELENA as e-learning was questioned by some academic staffs in Universitas Negeri Semarang. They regarded ELENA may not be different from other technological innovative strides that have been present in education for long but failed to produce significant impact in the teaching and learning of the subjects. Moreover, it would be discovered that much is still needed to be done to ensure that advantage of ELENA as e-learning technology is optimally exploited. It has been described that the existence ELENA activities the benefits obtained by instructors are that the instructor will more easily carry out material and model updates teaching in accordance with the demands of scientific developments that occur and also can efficiently control learners learning activities [8,9].

Our study focuses on describing a model of Introduction to Linguistics course using Cognitive Academic Language Learning Approach-based ELENA. Then, it analyzes the implementation of the model in Introduction to Linguistics course.

II. LITERATURE REVIEW

A. Linguistics

Linguistics is one branch of science that studies all aspects related to language. Linguistics is the basic science to explore the field of language studies and other sciences [10-12]. This statement implies the importance of Linguistics in various aspects of the scientific field. Linguistics is the foundation of language which is the basis of scientific. Linguistics is descriptive not prescriptive. This science is not descriptive of the rules of language that must be used.

The science of language is known as linguistics. It includes what are generally distinguished as descriptive linguistics and historical linguistics. Linguistics is now a highly technical subject; it embraces, both descriptively and historically, such major divisions as phonetics, grammar (including syntax and morphology), semantics, and pragmatics, dealing in detail with these various aspects of language. Moreover, Linguistics is related to other fields of study, such as Psycholinguistics, Stylistics, Sociolinguistics, Anthropological Linguistics, Philosophical Linguistics, Applied Linguistics, Computational Linguistics. The scope of linguistics looks as follows [13].

Halim in Harimurti argues that the Curriculum for Introduction to Linguistics is certainly closely related to the problems we face, namely Linguistics is a science that has a reciprocal relationship with other sciences, especially social science and humanity [2]. As explained by Bieswanger, the branch of Linguistics is divided into five core branches traditionally, namely phonetics, phonology, morphology, syntax, and semantics. Along with the times, a number of branches of Linguistics emerged such as pragmatics, stylistics, dialectology. Furthermore Linguistics engages in interest in other fields of science so that other branches of Linguistic science (interdisciplinary approaches) emerge such as sociolinguistics, anthropological linguistics, biolinguistics, clinical linguistics, computational linguistics, ethnolinguistics, philosophical linguistics, and psycholinguistics [13].

Introduction to Linguistics course is a prerequisite course for English Language Education courses at Universitas Negeri Semarang. After completing this course, the learners are expected to have adequate knowledge of the nature and characteristics of language, Linguistic research methodology, the history of development of Linguistics, and the school and dichotomy of language studies (linguistics) as the basis for language study and teaching. The course has a purpose, namely (a) this course allows learners to understand Linguistics as a science and possess basic knowledge of the nature of language, its function, and its relationship with other sciences; (b) learners have a basis for further study in the field of Linguistics; (c) learners in the main field of Linguistics have sufficient insight in other fields of science. Judging from the objectives of this Linguistic course, learners possess basic knowledge and have analytical competencies as skills to make observations, research, and assessment of other fields of science seen from the eyes of Linguistics [2,11].

The description above describes that Introduction to Linguistics is crucial learning in the field of language. Knowledge about Linguistics is not only limited to
understanding concepts and terms. Introduction Learning Linguistics also emphasizes that learners have an understanding and skill in carrying out analysis in observing the phenomena of the language around them. That is, understanding of Linguistics is not only seen from the structure of the language but also its involvement with language learning which is seen critically in the social and cultural fields. Thus, an appropriate Linguistic Learning approach is needed that can stimulate learners’ competence both in terms of understanding and skills in conducting language analysis.

Learning Linguistics means learning academic language. Academic reading is discussed by Sengupta as a purposeful and critical reading of lengthy academic reading texts for completing the study of specific subject areas [14]. The nature of academic reading texts poses different kinds of difficulties that hinder our learners from understanding the meaning of the text. Shen has investigated the difficulties of academic reading met by the EFL learners at the undergraduate level [15]. The results have indicated that academic reading difficulties are attributed to the deficiency in their language ability and their inability to comprehend content material. Vocabulary has been perceived to be the primary challenge especially when learners come to reading in their content-areas. Moreover, learners’ reading strategies and needs are various across disciplines, and thus most learners have showed a desire for greater support (e.g., highlighting key points, and pre-teaching terminologies, sentence structures, grammar, and reading strategies) [16]. Based on those problems, the learners need to be familiar with some strategies to support their comprehension in learning Linguistics as academic language.

B. Cognitive Academic Language Learning Approach (CALLA)

According to Chamot and O’Malley, Cognitive Academic Language Learning Approach (CALLA) is an instructional model developed to meet the academic needs of learners in learning English as a second language as well as a foreign language. This CALLA approach incorporates three components and instructional objectivity in its learning design, namely topics from subject matter content, the development of academic language skills (Academic Language Functions), and learning strategies that combine content and language acquisition [5].

In their Handbook of CALLA, Chamot and O’Malley describe the types of learning strategies used in this CALLA approach [5].

- Metacognitive strategies: this strategy includes planning, monitoring, and evaluating learning activities
- Cognitive strategies: strategies include exercising, organizing and elaborating knowledge.
- Social / affective strategies: learners learn the structure and function of language to practice in cooperative learning settings and obtain feedback from other learners effectively and coherence to communicate orally and in writing.

The important thing in teaching learning strategies is the use of methods for strategy instruction, namely how to introduce certain strategies to learners, influence the use of these strategies, maintain their use and transfer these strategies at the next opportunity. Following is the strategy instruction framework presented by Chamot and O’Malley [4].

These three learning strategies form the basis of the CALLA approach. The ability of learners to use metacognitive strategies appropriately trains learners to do learning planning; monitor learners understanding and production; and train how learners evaluate the learning objectives. Likewise, cognitive strategy abilities, learners are trained to manipulate material mentally (creating images or elaboration) and physically (doing grouping of material to be studied or taking notes). Finally, social / affective strategy capabilities, abilities that are used to interact with one another to help learning such as cooperative learning.

Chamot and O’Malley also explained the CALLA approach which consisted of five phases, namely preparation, presentation, practice, evaluation and expansion [5]. Each phase has a connection between one phase and another phase. For example, preparation is the phase of preparing learners to identify and reflect on previous knowledge related to the topic of learning. This means that the lecturer gives an introduction to the learning objectivity, introduces new vocabulary, and concrete experiences that are connected with the learner's prior knowledge. Furthermore, in the presentation phase, lecturers explain new information, skills, and learning strategies, information is presented through various methods to accommodate different learners learning styles. Then the practice phase, learners actively practice new concepts, learning skills and strategies such as cooperative learning activities. Furthermore, in the evaluation phase, learners practice individually and cooperatively towards self-evaluation. Finally, the expansion phase, learners integrate what is learned into the knowledge framework; compile and re-select prior
knowledge as needed; apply knowledge, skills, and study situations in the context of real life.

Plan of e-learning with CALLA approach is done to select the topic of the learning unit content, design learning objectives to be achieved by learners, establish appropriate learning materials, and design a series of instructional stages. Furthermore, CALLA classroom is a learners-centered classroom. The lecturer demonstrates how to organize and use initial knowledge, guide and improve the learners' knowledge framework, providing training opportunities in developing language skills and learning strategies. Finally, an evaluation of the performance of learners is achieved to achieve the learning objectives. So, those strategies will be useful for enhancing learners to comprehend the concept of Linguistics.

C. Electronic Learning Aid (ELENA)

The development of technology has penetrated all aspects of life including the world of education. Empowerment of the internet as a medium in the delivery of teaching material has become a trend in the last few decades, so that a new term is called e-learning. The use of the “e” prefix in some terms indicates the involvement of “electronic” in an activity. Onno W. Purbo and A.A. Nugraha explained that “e” in e-learning is used as a term for all technologies used in order to support learning efforts through internet electronic technology [17,18].

Web-based e-learning presentation allows lecture information to be real time and interactive. In the e-learning system lecture activities are offered to be able to serve as regular lectures. To provide services in lecture activities, MOODLE can be presented on a mobile basis using a mobile learning platform. Besides that, the development of extensions through adding plug-ins is also needed to provide lecture services as needed. Universitas Negeri Semarang has provided ELENA as a mobile learning platform.

![Fig. 3. The start page of the ELENA site.](image)

ELENA is abbreviation from Electronic Learning Aid. It is an elearning site developed MOODLE based version 3.4 of Universitas Negeri Semarang (UNNES) to support activities academic. MOODLE is an acronym for Modular Object Oriented Dynamic Learning Environment is an open source software package under the GNU / GPL license (Public License) which is useful for making and holding courses, training and education internet based developed by Martin Dougiamas since the 90s [18]. In the beginning its appearance in 2009, this elearning site was named ILMO which was later renamed become ELENA. This ELENA elearning site can be accessed via the address [http://elena.unnes.ac.id](http://elena.unnes.ac.id) [18].

To create an e-learning system is needed called a Learning Management System (LMS) that is available to work and share ideas. As stated by Rouse in Tucker, et al., LMS is a network software application based on technology used to plan, implement, and assess the learning process. In essence, LMS is a system that strengthens learning instructors by creating and delivering lesson content, monitoring learners participation online, and assessing learners performance [19,20]. ELENA is an LMS that can be used by lecturers at Universitas Negeri Semarang to create individual courses, send assignments, conduct discussions with learners asynchronously, organize quizzes and tests, and direct learners progress in the learning process.

The implementation of ELENA as an LMS as a transition from face-to-face learning process to learning that combines technology and face-to-face (blended learning) requires a measurement program (metric pilot) on its implementation and development. The program was adopted from Tucker, et al, which is called the Roadmap Metrics, as in the following table

<table>
<thead>
<tr>
<th>METRICS</th>
<th>KEY CONSIDERATIONS</th>
<th>EXPANSION INDICATORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timing and Pacing</td>
<td>✓ What is the goal of the program, and is the available timing realistic? ✓ When is the deal time to begin the proper support and assessment window? ✓ How long should the pilot last?</td>
<td>Timing and pacing work to provide support and achieve goals?</td>
</tr>
<tr>
<td>Learners feedback</td>
<td>✓ Is the tool /model /program engaging? ✓ Is it easy to use? ✓ Are the learners having a positive experience? ✓ Is there an impact on learning from a qualitative point of view?</td>
<td>Learners respond positively as measured by engagement, disposition toward use, and perceived impact on learning.</td>
</tr>
<tr>
<td>Teacher feedback</td>
<td>✓ Is the tool /model /program engaging? ✓ Is it easy to use? ✓ Are teachers having a positive experience? ✓ Is there an impact on learning from a qualitative point of view?</td>
<td>Teachers respond positively as measured by engagement, disposition toward use, and perceived impact on teaching and learning.</td>
</tr>
<tr>
<td>Learning Outcomes</td>
<td>✓ How do you expect the tool/ model/ program to impact learners achievement? ✓ What learning outcomes will you measure and by what assessments? ✓ Over what time period will you seek to measure the impact? ✓ Does the tool/model/program help meet these needs?</td>
<td>Initial indicators show some positive, if not statistically comprehensive correlation. Remembe, it can take a few years to gain solid data on learners achievement.</td>
</tr>
</tbody>
</table>
The Blended Learning Roadmap helps lecturers to commit to sustainable implementation in e-learning program. The program can be controlled in the transition phase towards the expansion phase or the final phase by means of continuous assessment, repetition of processes on the computer, continuous training. Implementation model of CALLA-based ELENA in Introduction to Linguistics course is evaluated by using e-learning program evaluation instruments.

III. METHOD

The study was conducted at English Education Program, English Department, Universitas Negeri Semarang. This study involves the learners in fourth semester 2017/2018 in English Department in Universitas Negeri Semarang. Our observation has been conducted to obtain information and analyze the implementation of CALLA-based ELENA in Introduction to Linguistics. The analysis is divided into three sections consisting of profile characteristics of learners, technology usage and the implementation of CALLA-based ELENA in Introduction to Linguistics. The first section contains the aspect on the background information such as gender, age, academic performance, computer ownership. The second section contains the aspect regarding the technology usage which asked the learners regarding the background of technology. The third section contains aspects regarding on implementation of CALLA-based ELENA in Introduction to Linguistics that obtain the information related to the usefulness, ease of use and self-efficacy.

IV. RESULTS AND DISCUSSION

A. Model of Introduction to Linguistics using CALLA-based ELENA

Based on the preliminary studies conducted in the Introduction to Linguistics courses in the English Language Education program at Semarang State University, several obstacles were found in the implementation of Introduction to Linguistics learning. These constraints include the demand for material understanding that is quite a lot both theoretically and practically, and the imbalance of mastery of theory and practice competencies mastered by students. The reason is the lack of innovation in learning models that can construct ideas and experiences of students, difficulties in understanding terms that are unfamiliar to students, and lack of time in delivering material thoroughly which should be done by optimizing student independence without waiting for the presence of lecturers.

The availability of adequate facilities and infrastructure at Semarang State University, certainly provides a high enough opportunity for more optimal use and management of learning. In this regard, there needs to be a learning model that can help students develop their competencies. Efforts that can be made to overcome the obstacles above are using the right learning approach and utilizing the available infrastructure. One of the efforts made was the development of an online Linguistics Introduction learning model: CALLA based-ELENA. The research on the development of this learning model was developed and implemented in several stages, namely arranging learning plans, implementing learning, and testing the effectiveness of the learning.

In the learning planning stage, the Semester Learning Plan (RPS) has an important role. RPS refers to the KKNI containing the competencies and learning objectives of the Linguistic Introduction to be achieved. RPS also describes methods, learning activities and learning assessment. The RPS formulated in the lecture unit (SAP) describes the teaching material, techniques and steps of learning carried out in each meeting. In this study, the subject chosen from the Introduction to Linguistics is Morphology. The results of the planned learning plan are tested for feasibility which will later be used as a guideline for learning activities in the implementation phase which is carried out in the next stage.
The implementation phase is carried out by conducting experiments (experiments) using the Introduction to Online Linguistics Learning model: ELENA based on the CALLA approach. In addition to exposing the ability of students to apply Linguistic concepts, students are given the opportunity to carry out exploration and independent learning through internet facilities that have been provided by Semarang State University such as ELENA. The steps of learning activities based on the CALLA approach include: preparation, presentation (presentation), practice (practice), evaluation, and expansion and the activity is carried out through ELENA features.

B. An Analysis of Implementation of CALLA-based ELENA

There are three main aspects to analyze results that consists of profile characteristics of learners; technology usage and the implementation of CALLA-based ELENA in Introduction to Linguistics.

The result for the first section by respondents comprises that 31% are male and 69% are female. Most of learners are 20-25 years old and just few learners that less 20 years old. A half of them come from urban and the others come from semi-urban. For academic performance, it divides into three categories: high, medium, and low. Most of them in medium (76%) and fours in low (14%) and high (10%). All learners have computers and most of them use the computer everyday. It means that the learners are able to operate computer well.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 20</td>
<td>5</td>
<td>17 %</td>
</tr>
<tr>
<td>20 -25</td>
<td>24</td>
<td>83 %</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>9</td>
<td>31 %</td>
</tr>
<tr>
<td>female</td>
<td>20</td>
<td>69 %</td>
</tr>
<tr>
<td>Family Background</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semi-urban</td>
<td>14</td>
<td>48 %</td>
</tr>
<tr>
<td>urban</td>
<td>15</td>
<td>52 %</td>
</tr>
<tr>
<td>Academic Performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low (&lt; 2.8)</td>
<td>4</td>
<td>14 %</td>
</tr>
</tbody>
</table>

Based on the technology usage, overall analysis shows that the awareness of learners towards technology usage is 97%. There is only 3% unaware with the technology usage.

While in identifying learners perception towards ELENA as technological tool. Table 3 shows the overall perception result of learning that referring to the arrangement of scale ranging from 1-3 (disagree to agree).
TABLE III. SUMMARY OF OVER ALL QUESTION ON ELENA

<table>
<thead>
<tr>
<th>Questions</th>
<th>Disagree</th>
<th>Not Sure</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overall, ELENA system is useful in my study</td>
<td>0</td>
<td>3%</td>
<td>95%</td>
</tr>
<tr>
<td>2. Overall, the quality in using ELENA is easy to use</td>
<td>1%</td>
<td>9%</td>
<td>90%</td>
</tr>
<tr>
<td>3. Overall, the ELENA affects my self efficiency</td>
<td>1%</td>
<td>14%</td>
<td>85%</td>
</tr>
</tbody>
</table>

The result from the learners’ perceptions towards implementation ELENA shows that, ELENA system is useful in their study, where the percentage of agree shows 95%. Meanwhile, only 5% not sure and 5% disagree. These show that, the learners aware about the implementation of ELENA and prefer to use the technology in their study. Due to the usefulness of ELENA as e-learning, the quality also should put under consideration. The result for the question on overall the quality in using e-learning is easy to use shows that 90% agree. Disagree shows 1% and not sure 9%. There also questions related to self-efficacy in the questionnaire. The result for question overall, the ELENA as e-learning affects my self-efficacy shows that 85% agree. While disagree 1%, and not sure 14%. The implementation of ELENA as e-learning has make the learners relies the important of e-learning in their study. Meanwhile, for the learners that still do not aware or understand about e-learning should be expose more during lecturing and communicating. This is important since ELENA could be useful and advantageous in searching for information and upgrade their knowledge and skills.

The use ELENA based on CALLA in Introduction to Linguistics encourage the score of learners. It describes from the Pre-test and Post-test.

The comparison of the pre-test and post-test scores of the field trial group learners was also significant between the pre-test and post-test scores. Most field trial learners have post-test scores above 75. The comparison also shows that the implementation of learning activities can run well. Although in the chart above there is one learners (I) who has decreased from the pre test 75 to the post test 58 but that does not affect the overall results. Judging from the average value, the average pretest value is 67 while the average value of the post test is 89.

Learners’ perceptions toward implementaion ELENA based on CALLA in Introduction to Linguistics obtained through questionnaires. It proved that learners of group field trials in implementation ELENA based on the CALLA in Introduction to Linguistics are positive. They argue that this practical learning model can be used wherever and whenever and the design of interactive learning to improve knowledge and apply the concepts of Linguistics to learning. The model of blended learning that strengthens and provides motivation to learners to learn independently and can improve their skills in applying linguistic concepts.

V. CONCLUSION

The result of the research shows that the strategy of implementing ELENA as e-learning will be the best way for students to be aware of new technology and willing to study in various concepts. The used of ELENA new technology should be used with an appropriate approach. It depends on the characteristics of the course. The use of an approach make the teaching learning process of e-learning will be meaningful. Moreover, the use CALLA-based ELENA could enhance independent learning and autonomous learning for students. The management should upgrade and maintain the technology in campus in order to ensure ELENA as e-learning could be useful to the students. Related to this result showing that e-learning affect their self-efficacy especially in upgrading their knowledge and skills.

ACKNOWLEDGMENT

I am grateful to:
- Prof. Dr. Zainal Rafli, M.Pd as first-supervisor and Prof. Dr. Emzir, M.Pd as second supervisor for guidance the writer during carrying out the preparation and completion of this paper.
- Izzati Gemi Seinsiani, S. Hum., M. Hum as partner in the study.
- Learners of the 2016/2017 and 2017/2018 English Language Education Study Program Universitas Negeri Semarang were involved in this study.

REFERENCES


