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Artificial Intelligence Role in Avoiding Ambiguous Vocabulary

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Abstract: Artificial Intelligence has undergone extraordinary development and progress in recent years and as such it has significantly influenced almost every domain or field of life, including education and learning. The purpose of this study is to investigate the use of AI to understand ambiguous words in English and to avoid the ambiguity caused by them during learning English as a second language. Given the somehow limited number of studies that have been focused on the effectiveness of using AI to learn vocabulary in general and ambiguous English vocabulary as one of the most common difficulties encountered during learning English as a second language, the paper aims to highlight precisely the advantages and effectiveness that the use of AI brings in this aspect. This paper aims to present key and effective elements of the use of AI to avoid the ambiguities created by ambiguous words and to better understand and acquire this ambiguous vocabulary in conversation and to correctly interpret the intended meaning of the speaker. The study highlights the considerable values of the use of AI both in education and in the process of learning the English language if used correctly and with the appropriate instructions. Regarding the methodology used, a number of questionnaires were designed and distributed where the questions focus on the impacts, facilities and benefits that AI brings to the acquisition of ambiguous vocabulary.

Keywords: Artificial intelligence, Technology, Ambiguity, Effectiveness, Facilities.

Introduction

The extraordinary development of artificial intelligence has brought a new era not only in technology but in every aspect of life (Kessler, 2018; Xia, 2022). Having such impressive efficiency and easy-to-use features enabled AI to gain immediate popularity as well as success in almost every domain. If we refer to how artificial intelligence has been defined by several scholars, we understand that AI is nothing less than the computerization of human intelligence in technological applications in order to perform various commands or given operations (Hassani et al., 2020). Despite the doubts or skepticism often encountered among different teachers or scholars about its use for studying purposes, the development of technology and AI is significantly affecting as well as extremely revolutionizing education specifically the acquisition of foreign languages (Kessler, 2018; Xia, 2022). Neither education, nor the learning of English language is left out of the impact and influence of AI as well as technology. Artificial Intelligence (AI), thanks to its outstanding progress, is also transforming the methods of education, learning in general, learning of foreign languages and especially vocabulary. Technology and AI offer the students of English as a Second Language the opportunity not only to access the relevant vocabulary but also to refine communicative language abilities as well as skills, enabling them to improve their language competence considerably and appropriately (De La Vall & Araya, 2023).

The difficulties that students encounter when learning English as a second language are often evidenced due to the uncertainty that arises during the acquisition of ambiguous vocabulary. The use of these words in sentences and conversations often lead to confusion, ambiguity, misunderstanding as well as misinterpretations. The resent rapid and significant development of AI has proven that the future will be closely connected to AI, so the education, the learning of ambiguous vocabulary, as well as the avoidance of the ambiguity that these words carry are no exception to this trend (Kim & Kim, 2022). AI and technology enable a variety of applications to

provide word translation, different explanations of the meaning of a word, alternatives associated with the relevant context, etc. It is now a fact that different AI tools such as: Natural Language Processing (NLP) applications, Chat GTP, etc. are playing an increasingly important role in learning the new vocabulary of English as a foreign language. It is high time that AI and technology are used even in the process of learning ambiguous vocabulary, avoiding and clarifying ambiguities, improving comprehension when using ambiguous vocabulary (Liu & Chen, 2023). It is essential that AI to be effectively and appropriately included in various activities about the acquisition of the ambiguous vocabulary and in the most efficient techniques that enable SLL of English to avoid the ambiguity encountered when using ambiguous vocabulary. The inclusion of AI in education has absolutely had a significant impact, therefore there are continuous efforts for a better and more effective integration of AI into teaching and learning process (Kim & Kim, 2022).

Integrating AI in the process of learning foreign languages and especially in the acquisition of ambiguous vocabulary and semantic ambiguity resolution brings about a number of advantages. The use of AI as well as other technological applications offer students effective tools to improve their linguistic skills and boost their vocabulary (Kessler, 2018). İf used appropriately, AI might assist the teaching process, revolutionize the convenctional methods of learning, therefore facilitate the acquisition of the ambguous vocabulary by giving effective solutions to a number of tasks (De La Vall & Araya, 2023). Adequate integration of AI in the proces of learning English as second language results in positive outcomes refering understanding appropriately the ambiguous vocabulary. First of all, it improves considerably English language learning and offers personalised explanations and appropriate examples to the students according to the given situation or context (Lee et al., 2022). Furthermore, AI offers students opportunity to access the right word that fits the given context and provide them with the right alternatives for understanding possible mistakes. Likewise, AI provides students instantly with the adequate materials or explanations for different exams and assessments since it offers immediate access to the required information as well as individual feedback (Lee et al., 2022). Integration of technology and AI in education as well as English language learning improves and enhances lingustic competences as well as English proficiency (Kruger, 2023). Autonomous as well as individual learning is provided by AI and computer assistance language learning thanks to the growing use of computers in education (Siemens, 2005). It offers a new perspective about self-directed learning of vocabulary which has increasingly become common in computer-assisted language learning (Xodabande & Atai, 2022). The appropriate integration of AI in learning ambiguous vocabulary obviously revolutionize the traditional methods of learning vocabulary making this process easier to access, really effective, profitable and convenient. (Chen et al., 2021; Semerikov et al., 2021).

On the other hand, the involvement of AI and technology in SL learning results in a number of disadvantages as well. One of the greatest concers of the implication of technology and AI in the acquisition of the ambiguous vocabulary is plagiarism. Students not always respect the ethical rules and deliver a totally copied work as it was compiled by them (Alharbi& Khalil, 2023). Moreover, the use of AI in certain tasks put at risk students creativity or critical thinking abilities leading them toward a complete passivity in the process of learning. These experiences make teachers more skeptical regarding the use of AI and technological tools in the proces of learning in general, and acquisition of the ambiguous vocabulary (Nazaretsky et al., 2022**)**. İn addition, neither teachers have gained enough qualifications nor students have been fully instructed how to use AI correctly and ethically in the process of English language learning and specifically in acquiring ambiguous vocabulary. This gap of appropriate knowledge and expertise regarding technology and AI make some of them doubtful toward the integration of AI in the proces of teaching and learning as well. (Alharbi, K., & Khalil, L. 2023)

Despite the drawbacks mentioned above the benefits of the involvement of AI tools in the process of learning in general and specifically in the acquisition of ambiguous vocabulary obviously prevail. The integration of AI in the process of teaching and learning of the ambiguous vocabulary not only facilitates students' performance but also it fulfills better students' needs, offers personalized learning and improves teaching methodologies (Zhang & Cao, 2022). Furthermore, this implication in education and vocabulary acquisition improves learning skills as well as extends its benefits and convenience globally (Fitria, 2021).

Method

The aim of this paper is to investigate the role of using AI in understanding and learning the meaning of ambiguous words in English as well as avoiding the ambiguity caused by them during learning English as a second language. It is concentrated in giving response to the following research questions:

1. Does the use of AI facilitate the process of learning of the ambiguous words by SLL of English?
2. Does the use of AI help SLL of English to avoid ambiguity caused by the ambiguous words in English?

The answers to these questions support the hypothesis that the use of AI in the process of learning English as second language facilitate the acquisition of the ambiguous vocabulary and clarify the meaning of the ambiguous words and avoid ambiguity caused by them. In order to conduct this research, it is used an integrated approach between quantitative and qualitative methods. According to Thomas (2003), the combination of quantitative and qualitative methods constitutes an integrated approach that gives a deeper insight and a better analysis of the study. The quantitative data are collected through two types of questionnaires: one questionnaire designed for students and the other for teachers, while the qualitative data were gathered by conducting semi-structured interviews and discussions in focus groups. The questionnaires, compiled and delivered by means of Google form, consisted of 10 questions each. The sample of the research consisted of 100 students from F.S. Noli university in Albania and 30 English teachers. The sampling of the research was done by a random selection of students but taking into consideration the representation at different levels: both in terms of the ability and mastery of the English language, as well as from different academic fields of study.

The students who participated in the study ranged in age from 19 to 24 years old, while the teachers ranged from 35 to 50. Questionnaires and focus group discussions were used to investigate the role of the use of AI tools in the avoidance of ambiguity caused by ambiguous words. The structured questionnaires were designed to assess students' and teachers' perceptions about ambiguity in English communication and their appreciation of the use of AI to understand, explain the meaning of the ambiguous words and resolve ambiguity. The questionnaires consisted of 10 questions with multiple-choice Likert-scale alternatives, focusing on how often students / teachers access or rely on AI to understand, explain and interpret ambiguous words when they are uncertain about their meaning or find difficulty to interpret them accurately. Focus group discussions provide us with qualitative data about students' experiences to avoid the ambiguity created as a result of the use of ambiguous words in discourse. Discussions were held in 2 focus groups, one of them consisted of students from the sample and the other consisted of teachers from the sample. Each focus group consisted of 7 students and 7 teachers who discussed and answered semi-structured interview questions. Discussions explored students' and teachers' experiences regarding the use of AI in resolving ambiguity created as a result of ambiguous words.

The research procedure was carried out in two stages. During the first phase, there were questionnaire surveys administered to students and to teachers as well. Participants completed the structured questionnaire independently and individually. This procedure aimed to collect the necessary data on students' and teachers' perceptions about the use of AI tools to understand, explain and avoid semantic ambiguity. During the second phase, there were conducted focus group discussions which provided deeper insights into how students and teachers try to make use of AI to avoid ambiguity and the effectiveness of using AI in clarifying the meaning of ambiguous words. Responses from the questionnaires were analyzed using descriptive statistics to summarize students' and teachers' perceptions as well as attitudes regarding using AI in understanding ambiguous vocabulary. In the same way, the qualitative data obtained from the focus group discussions regarding the students' as well as teachers' experiences in relation to ambiguous words and the use of AI to avoid this ambiguity were also analyzed. Descriptive statistics were used to analyze the questionnaire responses. Analysis of focus group discussions included analyzing responses, gathering data from students' experiences to understand how students make use of AI tools to avoid ambiguity. There are also scrutinized students' and teachers' perceptions of the effectiveness of using AI to understand and acquire correctly the ambiguous vocabulary. The data gathered from the responses of the teachers and students' interviews offered qualitative information about their opinion regarding the use of AI in avoiding ambiguity caused by the ambiguous words.

To collect further, more detailed and analytical data, it was thought to conduct a test on 39 Albanian students who actually study at F.S. Noli University and belong to the intermediate level of language acquisition. The students participating in this study were selected to belong to the same level of language acquisition and were randomly divided into two groups: an experimental group which consisted of 20 students and a control group of 19 students. In the experimental group, ambiguous vocabulary was taught and learned by using different AI applications, while in the students of the control group, the ambiguous words were taught through the traditional methods. In order to fulfil the aim of this research, there were carried out the following tests to students of both groups: Diagnostic Test for balancing students based on their overall knowledge of English before the experiment. (2) Achievement test in order to measure the achievements of both groups of students, experimental group and the control group in the end of the experiment.

At the beginning of the experimental period, the students of both groups were given a Diagnostic English Test so that the English language level of participants of both groups to be similar at start of the study. The ages of the participants ranged from 18 to 20. The diagnostic test consists of general exercises that reveal the general level of test takers in English. The evaluation of the test was done by the researcher herself together with one of her colleagues. Taking into consideration the goal of the research, there were used 10 exercises of 10 items each of them which consisted of ambiguous word acquisition and the language of the test was at the students' ability level.

The students of the experimental group were taught the ambiguous words along making use of technology and AI applications, such as automatic translation, NLP, Chat GTP etc. while in the control group the ambiguous words were taught just in the traditional way. The lessons were held by the researcher to limit the impact of teacher changeability during the classes that took place for 3 months (three sessions a week). At the end of the experimental period that lasted a semester, or 15 weeks, the experimental test was administered to each group. The tests contained 10 exercises of 10 items each that tested the acquisition of ambiguous words after the experimental period. Comparing the results will confirm or not the hypothesis of the study and will provide an answer to the research question.

Results and Discussion

The data gathered from the questionnaires delivered to 100 students and 30 teachers as well as the responses to the semi-structured interviews in the focus group discussions will provide us with the relevant information for analyzing the role of AI and technology in learning ambiguous vocabulary. Based on the statistical data collected by the questionnaire and the interviews conducted during the focus group discussion, we can analyze the experiences of the students and teachers regarding the use of AI during learning ambiguous vocabulary in English as second language learner. With regard to the responses of the questionnaire's questions organized with Likert-scale alternatives we can interpret the findings about the benefits of using AI in the process of learning ambiguous vocabulary. In order to create a better qualitative interpretation of the study, there are analyzed the responses of students and teachers from the semi-structured interviews conducted in the focus group discussion. The statistical results that are collected by the responses of the students to the questions of the questionnaires delivered are shown in Table.1 as well as bar-chart 1, while the responses of the teachers to the questionnaire compiled for them are displayed in Table. 2 as well as bar-chart 2. So, Table 1 shows the number of students out of the sample of 100 students for each response (never, seldom, often, usually, always) to the questionnaire questions while the bar-chart 1 shows the percentage of students for each response given to the questions. As for Table 2, it shows the number of teachers out of the sample of 30 teachers for each response (never, seldom, often, usually, always) to the questionnaire questions while the bar-chart 2 shows the percentage of teachers for each response given to the questions.

Table 1. The number of students for each Likert scale response to the questions of students questionnaire.

Questionnaire Questions for students	Never	Seldom	Often	Usually	Always
Do you come across ambiguous vocabulary while learning English?	5	9	13	31	42
Do you find it difficult to understand ambiguous vocabulary?	8	12	11	32	37
Do you use AI In learning ambiguous vocabulary?	7	6	12	31	44
Do you find it useful to use AI in understanding ambiguous vocabulary?	9	8	14	30	39
Do you use AI when you find difficulty with ambiguous vocabulary?	5	8	11	35	41
Do you use AI to resolve ambiguity when using ambiguous vocabulary?	4	7	9	34	46
Do you consider AI as a facility in understanding the meaning of an ambiguous word?	6	12	10	24	48
Do you find AI more beneficial than traditional methods in ambiguous vocabulary acquisition?	8	6	13	28	43
Do you consider AI reliable in understanding the meaning of an ambiguous word?	9	11	11	32	37
Would you consider AI tools as highly useful techniques for resolving semantic ambiguity?	5	8	9	34	44

Source: Data collected by the students' response to the questionnaire

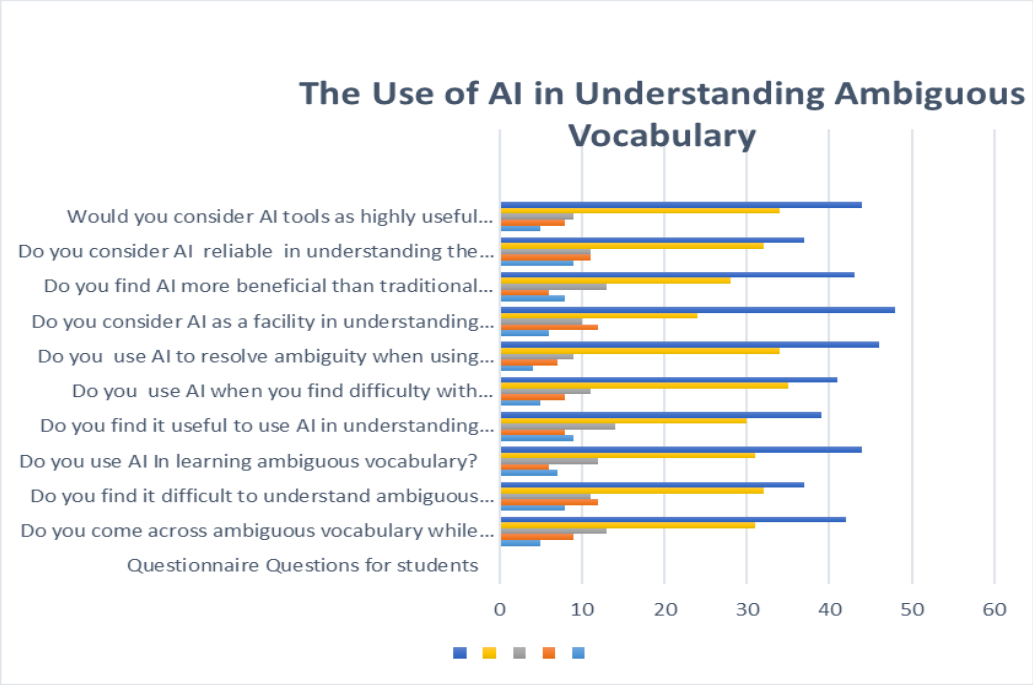

Figure 1. The percentage of students' response to each question of the student's questionnaire
Source: Data collected by the students' response to the questionnaire

Table 2. The number of teachers for each Likert scale response to the teacher's questionnaire

Questionnaire Questions for teachers	Never	Seldom	Often	Usually	Always
Do you come across ambiguous vocabulary while teaching English?	3	4	5	8	10
Do you find it difficult to make ambiguous vocabulary clear to students?	3	4	6	9	8
Do you use AI while teaching ambiguous vocabulary?	4	5	9	7	5
Do you find it useful to use AI in explaining ambiguous vocabulary?	4	5	8	5	7
Do you use AI when your students find difficulty in understanding ambiguous vocabulary?	5	6	7	5	7
Do you use AI to resolve ambiguity when you deal with explanations of ambiguous vocabulary?	4	5	7	8	6
Do you consider AI as a facility in explaining the meaning of an ambiguous word?	5	7	5	6	7
Do you find AI more beneficial than traditional methods in teaching ambiguous vocabulary?	5	4	6	8	7
Do you consider AI reliable in explaining and understanding the meaning of an ambiguous words?	4	5	6	7	6
Would you consider AI tools as highly useful techniques for resolving semantic ambiguity?	5	6	6	6	7

Source: Data collected by the teachers' response to the questionnaire

Analyzing the data collected from the questionnaire, it is obvious that most of the students of the sample use AI in learning ambiguous words. As much as 31% of the sample use it usually while as much as 44% use it always compared to 12 % who use it often, 6% who use AI seldom and only 7% who never use it in learning and understanding ambiguous vocabulary. Regarding the usefulness of the use of AI in understanding the meaning of the ambiguous words, 30 % of the students that participated in the survey consider AI usually useful in understanding ambiguous vocabulary and 39 % responded that they find the use of AI always useful in learning ambiguous vocabulary, only 14 percent often find AI useful in acquisition of ambiguous vocabulary compared to 8% that seldom consider AI useful in understanding ambiguous words and 9% who never find AI a useful tool in understanding ambiguous words.

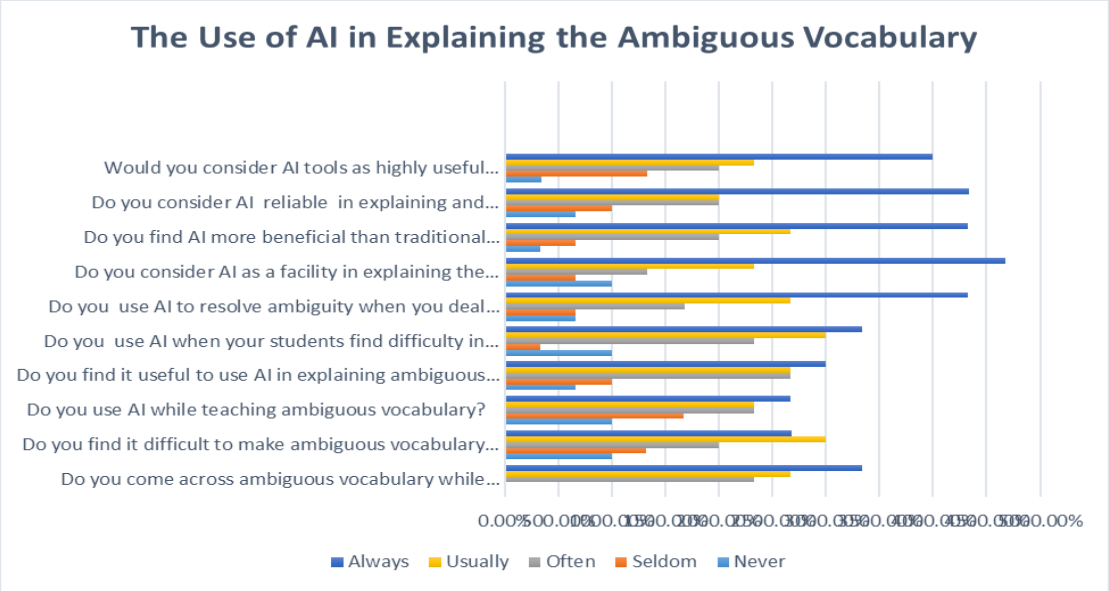

Figure 2. The percentage of teachers to each question of teachers' questionnaire according to Likert scale
Source: Data collected by the students' response to the questionnaire

Regarding the question if they consider AI a facility in understanding ambiguous words, the data collected proved that 48% of the students always find AI a facility in understanding ambiguous vocabulary, compared to 24% who usually consider AI a facility, 10% who responded that they seldom consider AI a facility and 12 % who seldom consider AI a facility while only 6% never consider AI a facility in understanding ambiguous vocabulary. Compared to the traditional ways of the acquisition of the ambiguous vocabulary, AI is considered by 43% of the students to be always more beneficial and by 28% of the students to be usually more beneficial, only 13 % of the students responded that they often considered AI more beneficial that the traditional methods in the acquisition of the ambiguous vocabulary, while 8% never and 6% seldom considered AI beneficial for the acquisition of the ambiguous words. As much as 69 % of the students find AI a reliable tool for understanding ambiguous words respectively 37% who find AI always reliable, 32% who usually find it reliable, in relation to 11% of the students who often considered AI reliable, while 9% never and 11% seldom consider AI as a reliable tool for understanding and learning ambiguous words. The majority of students involved in the study responded that they consider AI tools as highly useful techniques in resolving semantic ambiguity, out of whom 44% find AI always useful, 34 % usually useful, in the neutral zone there are as much as 9% who often find AI a useful technique in resolving ambiguity in comparison to 8% seldom and 5% that never find AI a useful technique in resolving ambiguity.

As far as the teachers' questionnaire is concerned, the data collected demonstrate that teachers are less enthusiastic about the use of AI in the acquisition of ambiguous vocabulary. Referring to the response of the teachers, only 40% of teachers use technology and AI in explaining the meaning of ambiguous words out of whom 23.3% use it usually and 16.7 % use it always in comparison to the 30% who are positioned in the neutral zone responding that they use it often, 16.7 % who seldom use it, and 13.3% who never use it. The teacher's skepticism is clear even regarding the question if they find AI more beneficial than traditional methods in teaching ambiguous vocabulary, as 26.7 % of them usually find AI more beneficial than the traditional methods and the same percentage always find AI more beneficial than traditional methods of acquiring ambiguous vocabulary. Similar results are evidenced from the data collected from the question if they consider AI reliable in explaining and understanding the meaning of an ambiguous word. So, only 20 % of the teachers always consider AI a reliable tool in explaining ambiguous vocabulary, compared to 26.7% of them who usually consider it reliable, as much as 23.3 % of often find AI a reliable tool, while 13.3% and 16.7% respectively never and seldom consider AI a reliable tool for explaining and understanding ambiguous vocabulary. Similarly, the data collected from the teachers' responses to the question if they consider AI tools as highly useful techniques for resolving semantic ambiguity show that 20% and 23.3 % of teachers responded usually and always to this question, as well as those who responded often and seldom comprise the same percentage of 20% in contrast with 16.7% of the teachers who never consider AI a highly useful technique for resolving ambiguity.

In order to get a qualitative view of the study, there are going to be analyzed the responses of the interviews in the focus group discussion. Both the students and the teachers were asked open-ended questions about the use of

AI in understanding and acquiring ambiguous vocabulary. Most of the students consider AI tools very useful and efficient applications for learning English in general and acquisition of ambiguous words. They find them very helpful in any kind of situation when you don't really understand a word or its nuances of meaning properly. According to them, AI applications are easily accessible and easy to use as well. The students believe that thanks to AI tools, they are provided with all the necessary information about the given vocabulary instantly. Students admitted that they lacked the necessary training for using AI tools in order that they use these appliances more appropriately and to avoid ethical violations. The students were very enthusiastic about benefits that AI tools have in learning English as second language and especially in the acquisition of the ambiguous vocabulary as AI has facilitated and simplified this process. They highlight the effectiveness, reliability and comfort over the traditional ways of learning ambiguous vocabulary.

The teachers' responses to the open-ended questions interviews give us a different view. Summarizing their response to the questions about using AI tools in teaching ambiguous vocabulary, it is obvious that most of the teachers are skeptical and suspicious about its use. They think that it may make students passive in the process of learning, less motivated, less creative and less productive. They question the possibility of damaging their critical thinking and problem-solving skills. They absolutely expressed their concern about the violation of the ethical rules. Teachers highlighted the risk of facing addiction to technology and being totally dependent on it. They fear the complete loss of creativity and imagination. According to them, what makes them hesitant was that pretty soon we will hardly find individualistic features in anybody's work as everything will be done on AI applications. Being accustomed to the traditional way of teaching, it is neither easy for most of the teachers to integrate AI in the process of teaching ambiguous vocabulary, nor acceptable to consider AI a facilitator in the process of explanation and acquisition of the ambiguous vocabulary. Obviously, the lack of relevant training and instructions about how and to what extend to integrate AI in teaching plays its own role in their skepticism. Nevertheless, there are a number of activities about understanding ambiguous vocabulary for which AI tools are very helpful and effective. If trained and instructed appropriately, the integration of AI in the process of teaching and learning ambiguous vocabulary will be a considerably effective way. Regarding the analysis of the data gained from the experimental test, they considered and then studied the following variables:

- Pre-test, the total points obtained in the diagnostic test/before
- Post-test, the total points obtained in the experimental test/after.

Table 5. The results from the experimental group and control group

Group	Variable	N	Minimum	Maximum	Average	Std. Deviation
Experimental group	Pre- Test	20	33	90	58.85	17.775
	Post- Test	20	51	91	75.10	12.155
	Valid N	20				
Control group	Pre- Test	19	31	90	57.58	17.795
	Post- Test	19	40	90	62.68	16.695
	Valid N	19				

The groups studied were designed as follows:

- The experimental group (n=20, 9m, 11f) used technology and AI applications in understanding ambiguous words.
- The control group (n=19, 7m, 12f) worked only with vocabulary in the traditional way

The comparison of these 2 groups was carried out through parametric statistical tests Independent Sample t-test and Paired Samples t test. As a prerequisite for the application of these statistical tests, the data were tested for normal distribution using the Shapiro–Wilk test. Then, to ensure the initial equality between the experimental and control groups, an independent sample T-Test was applied to the diagnostic test results. To assess the effect of using AI and technological appliances in ambiguous vocabulary acquisition within each group, a paired sample T-Test was used to compare the results of the pre- and post-tests, for each group separately. To compare the results of the experimental test, as well as to more accurately measure the effect of the method used, the experimental test and the new variable Difference (Difference = After – Before) were compared using the Independent Sample T-Test. This approach allows for a full assessment of the impact of context use on the acquisition of ambiguous vocabulary.

The results showed that the variables Pre-test, Post-test (for both groups) and Difference did not deviate significantly from normal distribution ($p > 0.05$), thus fulfilling the prerequisite for the use of parametric tests.A

T-Test for independent samples was performed to compare the mean preliminary results of the experimental group (M experimental= 58.9, SD = 17.8) and the control group (M control= 57.6, SD = 17.8). The results did not show any statistically significant difference between the two groups on the diagnostic test (t (37) = -0.22, p = .826>0.05). This indicates that the groups were comparable at baseline and any subsequent changes can be attributed to the experimental intervention (i.e., the use of AI and technology in the acquisition of ambiguous vocabulary.

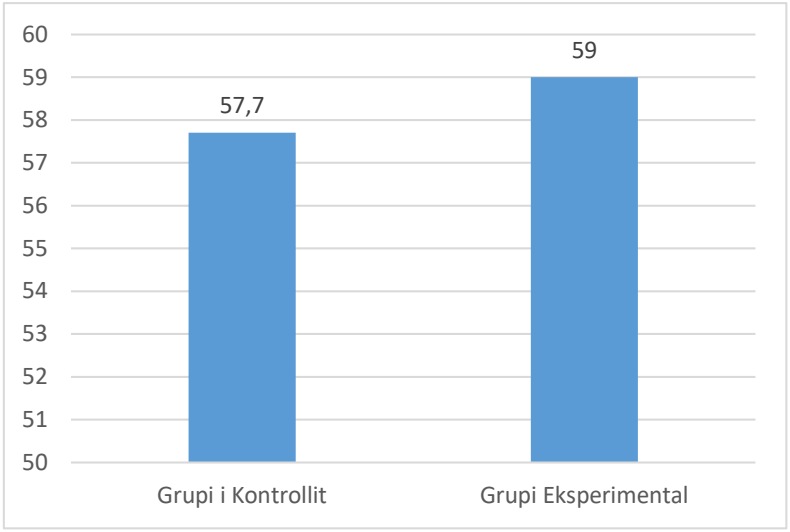

Figure 1. Comparison of the results of diagnostic tests for each group

Differences within each group. To assess whether there was a difference in students' scores on the two tests, a paired t-test was applied to each group.

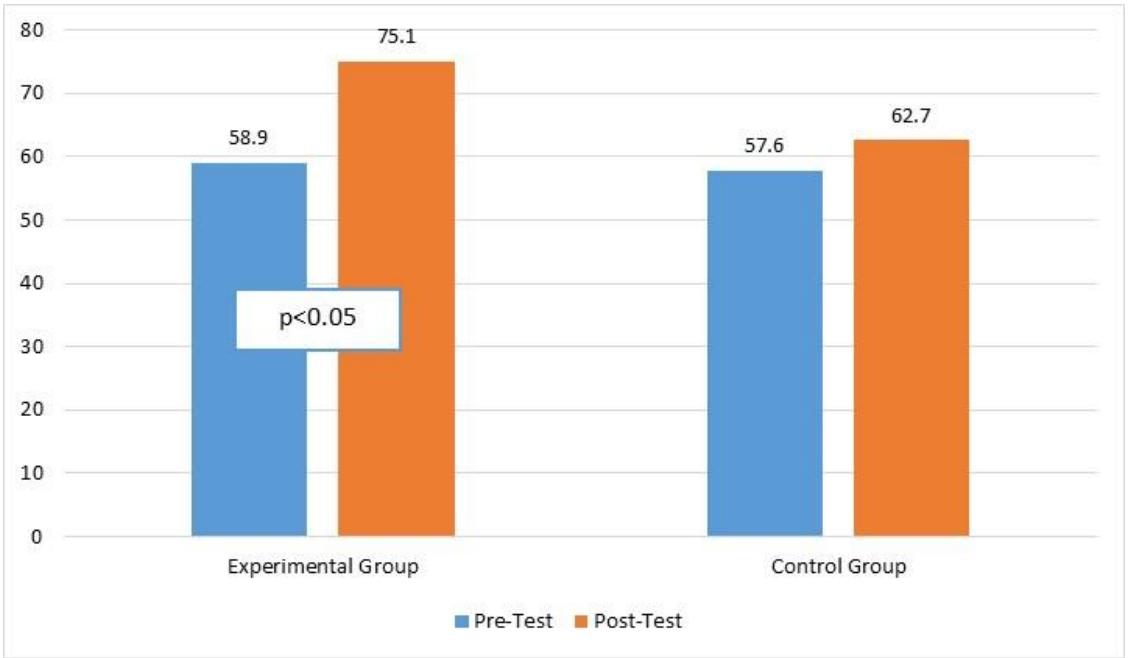

Figure 2. Comparison of ambiguous words acquisition before-after the experimental stage for each group

The experimental group showed a statistically significant improvement in the results after the intervention (MPost-Test = 75.1, SD = 12.2) compared to those before the intervention (MPre-Test = 58.9, SD = 17.9, t (19) = -7.04, p =0< 0.05.). This result shows that the use of technology and various AI applications have had a strong effect on the experimental group and as a result ambiguous vocabulary acquisition has improved considerably at the end of the experimental period.

The control group also showed a moderate improvement, also statistically significant (M Post-Test = 62.7, SD = 16.7; M Pre-Test = 57.6, SD = 17.8, t (18) = -2.93, p = .009<0.05). This change is natural as a result of the usual learning process or perhaps also due to the second exposure to the test model. Even at first glance, it seems that the improvement observed here is lower compared to the experimental group.

Conclusion

The aim of this study is to look into the use of AI in a better understanding and acquisition of the ambiguous words in English in order to avoid the ambiguity caused by them during learning English as a second language. It points out the benefits and facilities that the use of AI brings in the process of learning of the ambiguous vocabulary as a very important part of learning English as second language and how its use helps to avoid the ambiguities created by these words.

Integrating AI in the process of learning foreign languages, especially ambiguous vocabulary acquisition brings about a number of advantages to students and teachers as well. So, the use of AI and other technological applications offer students effective tools to improve their linguistic competences, boost and enhance their vocabulary (Kessler, 2018). İf used appropriately, AI might facilitate both the learning as well as the teaching process, revolutionize the traditional methods of teaching and learning, therefore facilitate the acquisition of the ambiguous vocabulary by giving effective solutions to a number of tasks (De La Vall & Araya, 2023). Adequate involvement of AI in the proces of learning English as second language results in positive outcomes refering learning and understanding appropriately nuances of meaning of the ambiguous vocabury, the ones that best fits to the given situation or context. Furthermore, it advances and refines considerably the learning process and offers students individualized explanations as well as appropriate examples according to the students necessities or given situation (Lee et al., 2022). Last but not least, AI offers students opportunity to access the right word that fits the given context and make out possible mistakes.

Likewise, AI provides students with the adequate materials or explanations for different exams or assessments regarding the acquisition of the ambiguous vocabulary since it offers immediate access to the required information as well as individual feedback (Lee et al., 2022). Integration of technology and AI in education facilitate English language learning, enhance students skills and upgrade their English proficiency (M. Krüger 2023). Autonomous as well as individualized learning is provided by AI and computer assistance language learning thanks to the growing use of computers in education (Siemens, 2005). It offers a new perspective to self-directed learning of vocabulary which has increasingly become common in computer-assisted language learning **(**Nong et al.,2021).

İn spite of benefits mentioned, the use of AI in Education, specifically English language learning causes some disadvantages as well. One of the drawbacks as a result of the implication of technology and AI in the acquisition of the ambiguous vocabulary, which was highlighed even by the teachers who took part in the study, is plagiarism. There are rare cases when students respect the ethical rules and in a considerable number of cases they copy the entire task pretending to be theirs (Alharbi & Khalil, 2023) These experiences make teachers more doubtful and skeptical regarding the use of AI and technological tools in the proces of learning in general, as well as in the ambiguous vocabulary acquisition. In addition, neither teachers have gained enough qualifications nor students have been fully instructed how to use AI correctly and ethically in the process of learning and specifically in the acquisition of the ambiguous vocabulary. This gap of appropriate knowledge and expertise regarding technology and AI make some of them hesitant toward the integration of AI in the proces of teaching and learning as well. (Alharbi & Khalil, 2023)

However, the role of AI has absolutely become an important element in the process of learning of English as a second language and especially in the acquision of ambiguous vocabulary as it obviously helps significantly in resolving students' problems about ambiguity caused as a result of them. It clearly facilitate and enhance the process of learning of the ambiguous vocabulary and upgrade the learning results. İf students and teachers get trained and instructed appropriately, the benefits of AI in the process of learning of the ambiguous vocabulary will be even greater and maybe undisputable. Education and English language learning definitely must keep up with the development of technology therefore this advancement implies the appropriate integration of AI in this process.

Recommendations

It goes without saying that technology and AI occupy a great part of our life and has taken its important fields by storm. Education and training cannot be left behind this successful development. As any other kind of development, the use of technology and AI in the acquisition of ambiguous vocabulary can neither be taken for granted, nor can be underestimated. It must be considered seriously its role in education in general, and specifically in the proper understanding of the sematic ambiguity. What should we as teachers do, is to look at *the bright side and its advantages* rather than *pointing out just its disadvantages*.

We should get rid of the scepticism and embrace science, development, technology and AI as well. Instead of prejudicing AI's disadvantages, for which we of course are aware and cannot deny, we must train ourselves and then our students about its proper use in Learning English as SL and particularly vocabulary acquisition in order to get the best use of it. We must lead our studentst to the correct and proper use of AI in vocabulary acquisition and instruct them in order to avoid ethical issues, plagiarism or "lazziness". As several studies prove that AI facilitate students learning and resolves semantic ambiguity easier and faster than traditional methods, let's not hesitate but include it in the teaching of English as a second language and in the proper acquisition of ambiguous vocabulary.

Scientific Ethics Declaration

* The author declares that the scientific ethical and legal responsibility of this article published in EPESS journal belongs to the author.

Conflict of Interest

* The author declares that she has no conflict of interest

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