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The Effectiveness of the Generative Model in Learning Synonyms and Antonyms in English Language at Kingdom of Saudi Arabia

A B S T R A C T

The research aims to identify the effectiveness of using the generative model in learning synonyms and antonyms in English language course for secondary second-grade female students in Bisha governorate. To achieve this goal, the researchers implemented a quasi-experimental approach. Generative Learning Model was employed in class using a list of synonyms and antonyms chosen by the researchers from Saudi English language curriculum in the secondary stage. The pre-test and post-test were used as data gathering tools. Forty-eight female students from the secondary second-grade were chosen randomly and divided into two groups; the control group consisted of twenty-four female students and the experimental group consisted of twenty-four female students. The results indicate that, there was a statistically significant difference between the mean scores of the experimental and control group members on the post-test in the levels of remembering, understanding and application in favor of the experimental group.

The research recommended using Generative Learning Model in the educational process because of its proven effectiveness in developing the level of learning synonyms and antonyms.

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فاعلية النموذج التوليدي في تعلم المترادفات والمتضادات في اللغة الإنجليزية بالمملكة العربية السعودية
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 المستخلص:

هدف البحث إلى تعرف فاعلية استخدام النموذج التوليدي في تعلم المترادفات والمتضادات في مقرر اللغة الإنجليزية لدى طالبات الصف الثاني الثانوي بمحافظة بيشة. لتحقيق هذا الهدف، قام الباحثان بتطبيق المنهج شبه تجريبي. تم استخدام نموذج التعلم التوليدي في الفصل باستخدام قائمة المترادفات والمتضادات التي اختارها الباحثان من منهج اللغة الإنجليزية السعودي بالمرحلة الثانوية. تم استخدام الاختبارين القبلي والبعدي كأدوات لجمع البيانات. كما تم اختيار ثمان وأربعين طالبة من الصف الثاني الثانوي عشوائياً وقسمن إلى مجموعتين: المجموعة الضابطة تكونت من أربع وعشرين طالبة والمجموعة التجريبية تكونت من أربع وعشرين طالبة. أشارت النتائج إلى وجود فروق ذات دلالة إحصائية بين متوسطات درجات أفراد المجموعة التجريبية والضابطة في الاختبار البعدي في مستويات التذكر، والفهم، والتطبيق لصالح المجموعة التجريبية. أوصى البحث باستخدام نموذج التعلم التوليدي في العملية التعليمية لما له من فاعلية مثبتة في تطوير مستوى تعلم المترادفات والمتضادات.

الكلمات المفتاحية: النموذج التوليدي ، المترادفات ، المتضادات .

Introduction:

The learning and mastery of basic language skills is closely related to the learning of vocabulary, especially synonyms and antonyms. Linguistic vocabularies are symbols that are represented in the human mind to facilitate the process of expressing things and ideas. Learning of English language synonyms and antonyms is primarily related to knowledge acquisition processes; this in turn, is reflected in the power of learning and acquiring scientific concepts in various sciences in the view of their impact on other linguistic skills, especially with regard to reading and writing skills (Al-Damig, 2011).

In response to the challenges and requirements of the era, many modern teaching strategies, methods and models have emerged, including the generative learning model, which has received a great deal of care and attention by the educational systems in developed countries. The World Education Conference in 1990 and the Dakar Conference in 2000 recommended that students should be educated in a variety of ways, so that all learners can obtain maximum success and achievement within the framework of their capabilities and abilities and work on developing their skills and outstanding performance in the current era (Al Zand, 2011).

The generative learning model is one of the modern models that emphasize learning and focus on the activity of the learner during the learning process. This increases the learner's ability to understand and link between information. Generative learning arises when the learner uses various strategies to reach learning, and generative education encourages reducing reliance on the teacher and creates more self-reliance for the learner and provides an opportunity for the learner by organizing the study content, linking the new content of the educational material with the previous knowledge of the learners and generating ideas that work on developing thinking (Al-Mahdaoui, 2006).

The process of learning synonyms and antonyms of English language and acquiring skills is a major goal of the educational process in the Kingdom of Saudi Arabia, because of the importance of language, especially different careers that are reflected in the life of the individual and society alike. The primary goal of language learning is to provide the learner with the ability to communicate in languages, and the process of using vocabulary is an essential element in learning any language (Berry, 2010).

Recent trends in education call for the necessity of providing education for all members of society, while adopting and using modern teaching strategies and models that center on the learner and help him master this language. So that he becomes able to use what he has learned in past years and add to it what will be learned from vocabulary.

The researchers conclude that the importance of learning English language has become a recognized issue. Therefore, modern methods and models of teaching should be used in teaching English language, which is what the current study will do, that is the effectiveness of using the generative model in learning synonyms and antonyms in the English language course for second-grade secondary school female students in Bishah governorate in the Kingdom of Saudi Arabia.

Research Problem:

The research problem is evidenced by the results of many related studies that confirm the existence of a problem among secondary school students in learning the vocabulary of English language. The study of Al-Naghmishi (2014) concluded that students in Buraidah in Saudi Arabia face many difficulties in acquiring English vocabulary. It used the semantic mapping strategy to develop the students' English language vocabulary and maintain the impact of learning it. Al-Nisour (2005) also indicated the necessity of using foreign vocabulary learning strategies; putting into consideration that, intermediate school students in Jordan face inferiority in acquiring English vocabulary. Whereas, the study of Zureikat, (2013) shed light on the necessity to improve the vocabulary acquisition of secondary school students, and it also called for the necessity of using strategies to activate prior knowledge of the content to increase the reading comprehension and vocabulary acquisition of students which are the main problems facing students. On the other hand, the study of Al-Ananza, (2015) revealed that despite the efforts made to develop the level of learning English language, the results achieved so far are not encouraging in terms of language acquisition. Most secondary school students still have insufficient use of vocabulary. The study of Salama, (2007) indicated, that the learners have achieved less than their capabilities in using the language in new situations. The study also indicated that vocabulary acquisition is the main aspect of learning English language.

From the previous studies, it became clear that female students have a weakness in learning English language, especially synonyms and antonyms. Therefore, the researchers conducted an exploratory study with the aim of identifying some of the obstacles and problems of learning synonyms and antonyms in English language on a sample of 75 secondary school female students in Bisha governorate, Saudi Arabia. The survey found the following results: Regarding the problems that prevent female students from practicing English language, 36% of the sample responded by forgetting vocabulary. The most successful way to increase vocabulary is the response by making vocabulary illustrations, with the highest response rate of 55.3%. Regarding what the student needs while learning English language, obtaining new

vocabulary and practicing its use was among the first needs of 60.4% of the total sample. Moreover, 94.2% of the sample answered yes to their opinion of the aid of learning synonyms and antonyms in developing the linguistic outcome. As for the appropriate learning method in learning synonyms and antonyms in English language, the use of words in speaking and writing was by 53.5%, followed by the visual method by 25.8%, then the auditory method by 14.2%.

The previous results illustrated the evident that the female students have a need to learn synonyms and antonyms in English language and to be trained in their use. To overcome this problem, the importance of making a means of clarification between vocabulary by forming mental associations should be taken into consideration. This is what the generative model in education does in using synonyms and antonyms among students in English language, and the generative model helps learners to participate actively in the learning process and generate knowledge.

In light of the foregoing, the research problem can be identified in the weakness of female students in learning vocabulary (synonyms and antonyms) in English language course. Therefore, the researchers believe that the current study should test the effect of using the generative model in learning synonyms and antonyms in English language course for the secondary second-grade school female students.

Research Questions:

- 1- What is the effectiveness of using the generative model in learning synonyms and antonyms in English language course for second-grade secondary school female students in the level of understanding?
- 2- What is the effectiveness of using the generative model in learning synonyms and antonyms in English language course for second-grade secondary school students in the level of remembering?
- 3- What is the effectiveness of using the generative model in learning synonyms and antonyms in English language course for second-grade secondary school female students in the level of application?
- 4- What is the effectiveness of using the generative model in learning synonyms and antonyms in English language course for second-grade secondary school female students in Bisha governorate?

Research Objectives:

This research aims to:

- 1- know the effectiveness of using the generative model in the achievement of synonyms in English language course for second-grade secondary school female students in the level of understanding.
- 2- know the effectiveness of using the generative model in the achievement of antonyms in English language course for the second-grade secondary school female students in the level of remembering.
- 3- know the effectiveness of using the generative model in the achievement of synonyms in English language course for second-grade secondary school female students in the level of application.

4- know the effectiveness of using the generative model in the achievement of synonyms in English language course for second-grade secondary school female students in general.

Significance of the Research:

The significance of the current research is that it may be useful in:

- 1- presenting a visualization of how to use the generative model to learn a proposed unit in synonyms and antonyms in the second-grade English language course.
- 2- using the generative model in learning synonyms and antonyms among secondary school female students.
- 3- helping English language teachers in the secondary stage in developing new strategies and models for teaching English language courses, especially synonyms and antonyms.
- 4- directing the attention of educational supervisors towards teachers and urging them to use the generative model in teaching synonyms and antonyms in English language courses.
- 5- urging those in charge of curriculum development in the Ministry of Education to improve the methods of acquiring English language vocabulary in many ways that allow the use of the generative model.

Research Limits:

a- Human Limits: Female students of the second year of secondary education in Bisha governorate in the Kingdom of Saudi Arabia.

b- Objective limits: Confined to studying the effectiveness of using the generative model in learning synonyms and antonyms in English language courses by teaching a proposed unit entitled (Travel around the World) prepared according to the generative model.

c- Spatial boundaries: The research was conducted in two schools in the governorate of Bisha female secondary schools, in the Kingdom of Saudi Arabia.

d- Temporal boundaries: The academic year 2019-2020 AD.

Research Terms:

Effectiveness:

It is defined as the ability to achieve the result according to specific criteria, and the efficiency increases whenever the result can be fully achieved, Badawi (2001).

The researchers defined it as the degree of growth expressed by the difference between the average grades of the second year secondary school female students in the two applications of the pre- and post-achievement test after using the generative model in teaching a proposed unit (Travel around the World) in English language course.

The Generative Learning Model (G.L.M):

It is a model that reflects Vygotsky's view of learning.

The researchers defined it as a model that aims to help the students generate multiple types of relationships. In this study this model is to link previous experiences with later experiences of synonyms and antonyms in the prepared unit of English language course.

Synonyms:

They are words that give the same meaning or are equivalent in meaning.

The researchers defined them as the words that give the same meaning or denote the same topic in English language courses and which are learned using the generative model.

Antonyms:

Antonyms in the linguistic sciences are the two words that denote two opposite meanings such as black and white. (Mukhtar, 2008).

The researchers defined them as words that denote opposite meanings in English language course and that are learned using the generative model.

Literature Review:

Generative Learning Model:

The generative learning model is one of the most prominent models that focused on the development of mental skills and cognitive development of the learner. It focuses on the base that learning is a positive, active process in which students' past experiences are recalled and linked to what will be learned to form new ideas. This model also relies on mental processes that are a product of the brain's work during learning or facing daily situations. The generation of information arises when using cognitive and metacognitive strategies during their social nature. (Solomon, 2015)

Al-Shammari (2018) defines the generative learning model as: "a process of building self-knowledge through interactive mental activities that link the learner's prior knowledge with the new knowledge that comes to him through participatory learning among students and the strengthening and reinforcing of the teacher" p. 136.

Al-Zahrani (2018) defines the generative learning model as: "An educational model based on constructive theory aims to develop students' achievement by generating relationships between their previous experiences and their subsequent experiences. Beside generating relationships between parts of knowledge or subsequent experiences to be acquired and according to the phases of the generative learning model: preliminary stage, the stage of concentration, the stage of modernization, the stage of application.

Obaid (2013) defines the generative learning model as: "A teaching model that includes four sequential stages: the introduction phase, the focus phase, the challenge phase, and the application phase. It aims to achieve meaning-based learning by providing the learner with the ability to generate a relationship between his previous and new experience and between the parts of the new knowledge he acquired.

Wittrock (2014) believes that learning according to the generative model is: the process of creating relationships, or structure, between components or parts of information that the individual tries to understand, and the process of creating relationships between an individual's knowledge and the information that the individual tries to understand. The learner should be active in establishing these relationships; and caring for the basic structure of the information that must be learned.

Objectives of the Generative Learning Model:

Obaid (2013) believes that the objectives of the generative education model are as follows:

- * It allows students to think freely, which leads to the development of their creative thinking.
- * It promotes respect for the opinions of others and achieves self-confidence, self-respect and appreciation.
- * It leads to active learning and meaningful learning occurring and thus has a lasting impact.
- * It encourages the student to bring the activity from his own, and transforms his role from a listener and receiver of knowledge to a participant and actor in building it.
- * It makes students think about different solutions to one problem, which leads them to use creative thinking in its broadest sense.

The Main Pillars of the Generative Learning Model:

Generative learning takes place when the learner participates in the appropriate cognitive processing during learning, including the presence of relevant information, the organization of mentally incoming information into a coherent cognitive structure, the merging of cognitive structures with others and with related prior knowledge and its activation in long-term memory, (Mayer and Fiorella, (2015).

The teacher's role in the generative learning model lies in assisting students in generating connections or helping them to relate new ideas to each other with their prior learning. The student is directed to find these connections. Education moves here from preparing information to facilitating the building of a fabric of knowledge, (Al-Kubaisi and Al-Saadi, (2012).

Al-Majdalawi and Al-Abed (2018) argue that the roles which the generative model gives to the learner as an active participant who trusts his abilities to relate, analyze and make judgments, and to use his knowledge to build new meaningful knowledge. Those roles that the generative model cast on the teacher as a facilitator and modifier of knowledge, and a provider for material experiences and realistic activities, leads to an appropriate learning environment to form meaningful learning, and facilitates the development of their vocabulary.

Obeid (2013) believes that generative learning focuses on learning based on understanding by linking the student's previous experiences in the structure of knowledge with his subsequent experiences, and forming relationships between them. In order for the individual to remain a new knowledge he has, it should be merged into the already existing cognitive structure, and this takes place through a real social interaction between students and between them and their teacher.

In research conducted by Riezebos, Yu and Zhu, (2016), it has been demonstrated that the strategy of the generative learning model is based on creating and refining personal mental structures around educational environments by creating a theoretical framework for generative learning that combines content and context analysis. Its aim is to allow students to participate in building the conveyed content and framing the learning contexts; where they can link new information with old information, gain meaningful knowledge and use their metacognitive abilities.

Stages and Phases of the Generative Learning Model:

Askar, (2018) and Fiorella & Mayer, (2015) indicated that the generative learning model consists of four stages, or phases, which can be presented as follows:

Preliminary Phase:

Guidance: Through which students are directed to think about the topic of the lesson and link the topic of the lesson with the previous topics.

Provoking up Students' Daily Experiences: Provoking up students' experiences through the process (information synthesis) where the teacher asks students to ask questions themselves.

Presentation of Students' Ideas: Through the dialogue discussion between the teacher and students, the teacher allows the students to think out loud and then their answers are presented to the teacher, whether with the verbal and written answer in their own books. Thus the teacher can know what the learners have from previous information.

Interpreting Students' Ideas and Building New Ideas: The teacher, along with students, explains their most important ideas and uses them to build new ideas, including the teacher's comment on the ideas presented in the previous step.

The Focus Phase:

This phase focuses on the students themselves because they are cooperative work teams whose number ranges from (4-6) individuals. So that the work is distributed among the members of each group according to the distribution of roles among them. The distribution of students allows the teacher to move between these teams. In this phase connectivity between day-to-day knowledge and targeted knowledge should be achieved.

The Challenge Phase:

This phase is done by providing the leader of each group with the opportunity to contribute his observations and comments, observing the activities of the students and helping them with the school educational pillars, and reintroducing the scientific terms and concepts to be accessed.

The Application Phase:

The teacher uses in this stage the scientific concepts as functional tools to solve scientific problems and reach results and applications used in new life situations, then help expand the scope of the concept.

The Role of Generative Learning Model in Developing English language Vocabulary:

According to the generative learning model, learners who employ and benefit from it in learning synonyms and antonyms can be able to develop new knowledge based on the analysis and synthesis of information. They can relate their previous knowledge to the new knowledge in order to develop their cognitive representations that empower and help them to produce and create new ideas and new processes or models in which this knowledge is used, (Al-Ruwais, 2010).

The increase in the attainment of synonyms and antonyms in English language and the ease of familiarity with them depends mainly on the generative learning model. These will be through focusing during its various stages on carrying out many mental and practical investigative activities that provide opportunities for the learner to practice science processes,

such as observation, interpretation, classification, measurement, prediction and procedural definition in order to reach the concepts and information by himself. The learner also accesses knowledge by himself and links it with his previous knowledge and experiences, and the learning supports are used to reach the learner to the maximum of his capabilities, (Ahmad, 2013: 355).

Previous Studies:

This section will introduce researches and previous studies that investigate both generative learning model and synonyms and antonyms. It will facilitate making comparison and contrast between the present study and the previous researches in terms of methodology, instruments, population and sampling, results and some other aspects.

Ting, (2016) study aimed to present a conceptual framework, using the generative model and proposing a framework of four levels of smart education and ten key features of smart learning environments for intelligent learners who need them in developing knowledge. The smart teaching framework includes discrimination based on classroom instruction, cooperative learning based on group, individualized personal learning and comprehensive learning based on the generative model, and the study reached many results, the most important are:

- * The basic concept of generative learning includes the creation and refinement of personal mental structures around educational environments by creating a theoretical framework for generative learning that combines content and context analysis.
- * The generative model allows students to participate in building the conveyed content and framing learning contexts; where they can link new information with old information, gain meaningful knowledge and use their metacognitive abilities.

Wahydo, (2013) study investigated whether the synonyms and antonyms tests measured similar ranges of verbal abilities, and whether they had a similar psychological effect. The data used in this study are subsets of data collected during the University of Gadjadara Postgraduate Admission Test (UGM) in 2013-2014 academic year using three forms of PAPS Graduate Academic Aptitude Test. Confirmatory factor analysis revealed that tests of synonyms and antonyms assess similar areas of verbal ability. A model combining items from both tests to represent one dimension interpreted the data better than a model that separated the two tests into aspects of different dimensions. The study indicated large correlations between dimensions in the one-dimensional model showed correlations with areas of verbal abilities such as verbal knowledge, comprehension and reasoning. Additional analysis using item-level analysis showed that contrast elements tend to be more difficult than elements of synonyms, and this finding indicates that although both tests evaluate similar content, answering the contrast test requires a more complex cognitive process than answering the synonym test.

Anderman, (2010) study aimed at identifying developments in the field of the research about motivation, achievement and comment, and their role in how these developments are reflected in the Wittrock educational model of learning. Specifically, the study focused on the roles of prior knowledge, the generation of knowledge, and beliefs about ability. It reached many results, such as:

* The Wittrock Model of Learning is not designed as a generative process as a model for human motivation, yet the basic principles of the model are reflected in many current motivational research theories and programs.

* The role of perception, the building of meaning, and beliefs about ability - are actually three areas that have become very important topics in the study of academic motivation.

Ball, (2009) study aimed to present the preparation of teachers to teach in classes that are culturally and linguistically complex in international contexts. It examined the long-term social and institutional implications of professional development and documentation processes that facilitate teacher continuous learning. The study reached many results, the most important are:

* The generative model contributed to the development of general knowledge by teachers and shows how they relied on that knowledge in the thinking processes with students and during the teaching process.

* The generative model accelerates educational parity across ethnic and social boundaries. It also contributes to overcoming the legacy of academic failure that afflicts many students through an expanded understanding of the processes of generative change.

Research Hypotheses:

1- There is a statistically significant difference at the level of (0.05) between the mean scores of the experimental group students and the scores of the control group students in the post application of the post-test at the level of understanding.

2- There is a statistically significant difference at the level of (0.05) between the mean scores of the experimental group students and the scores of the control group students in the post application of the post-test in the level of remembering.

3- There is a statistically significant difference at the level of (0.05) between the mean scores of the experimental group students and the scores of the control group students in the post application of the post-test at the level of application.

4- There is a statistically significant difference at the level of (0.05) between the mean scores of the experimental group students and the scores of the control group students in the post application of the post-test in general.

Research Methodology:

A qualitative research approach for this research was chosen because it is useful to understand how participants make meaning of the phenomenon being studied; i.e., the effectiveness of generative learning model in learning synonyms and antonyms in English language course. The researchers used a quasi-experimental approach because it included a purposive sampling, systematic data collection and data analysis procedures. Research Design Procedures for selecting study participants and collecting and analyzing data were described in this section.

Research Population:

The research community consists of all the second grade secondary school female students in the governorate of Bisha, in the second semester of the academic year 2019/2020 AD.

Research Sample:

For the purpose of this study, (48) second-grade secondary school EFL female students were randomly selected to participate in the study. They were divided into two groups. The first is the control group, which consisted of (24), female students. The second is the experimental group that consisted of 24 female students. The purpose of selecting secondary school participants was based on the researchers' assumption that these learners would have a better grasp on learning synonyms and antonyms and they would better be able to answer the questions of the achievement test. This was due to their advanced level and longer exposure to English language. The population of the study was EFL language learners attending this language institution. Since the participants were only female learners, gender was not a variable in the current study. The age range was between (15) and (18) years.

Research Tools and Materials:

Due to the nature of the research and its objectives, the following tools and materials have been used:

- 1- Achievement test in synonyms and antonyms of the proposed unit (Travel around the World) of the English language course.
- 2- A teacher's guide for teaching synonyms and antonyms in the proposed unit Travel around the World) according to the generative learning model.
- 3- List of synonyms and antonyms in the proposed unit according to the generative learning model.
- 4- Activity brochure for female students.

Exploratory Testing of the Research Tool (Achievement Test):

After completing the preparation of the research tool (achievement test) and amending it in light of the opinions of the arbitrators, the research tool was tested on a random sample of (30) students from outside the study sample, in order to verify: the coefficient of ease, difficulty and discrimination, as well as the validity and reliability of the study tool.

Calculation of the difficulty and ease factor:

The researchers calculated the difficulty and ease factor for an exploratory sample reached (30) female students. The results was represented in the following table:

Table No. (1) Difficulty and Ease Factor for the Achievement Test

Question No.	Correct Answers	Wrong Answers	Difficulty Factor	Ease Factor
1	16	14	53.3%	46.7%
2	11	19	36.7%	63.3%
3	13	17	43.3%	56.7%
4	14	16	46.7%	53.3%
5	12	18	40.0%	60.0%
6	13	17	43.3%	56.7%
7	17	13	56.7%	43.3%
8	10	20	33.3%	66.7%
9	15	15	50.0%	50.0%
10	19	11	63.3%	36.7%
11	18	12	60.0%	40.0%
12	17	13	56.7%	43.3%
13	12	18	40.0%	60.0%
14	15	15	50.0%	50.0%
15	13	17	43.3%	56.7%
16	11	19	36.7%	63.3%
17	10	20	33.3%	66.7%
18	14	16	46.7%	53.3%
19	12	18	40.0%	60.0%
20	18	12	60.0%	40.0%

Table No. (1) indicates that the values of the difficulty factor is ranged from (33.3% to 63.3%). Facilitation coefficients is ranged between (36.7% to 66.7%). All these values are acceptable, and indicate the validity of the test for the field application. According to Allam (2007), if the difficulty factor is less than (25%), the question is considered difficult, but if it exceeds (75%), the question is considered easy, and what falls between them is considered the as a medium difficulty.

Validity Calculation of the Test Internal Consistency:

The researchers calculated the internal consistency of the test items using the Pearson correlation coefficients between each item and the total score of the test, which is shown in the following table:

Table No. (2) coefficients of correlation of the test items with the total score of the test

No.	Correlation coefficient	Significance Level	No.	Correlation coefficient	Significance Level
1	0.326*	Significant	11	0.520**	Significant
2	0.645**	Significant	12	0.447**	Significant
3	0.566**	Significant	13	0.393*	Significant
4	0.690**	Significant	14	0.740**	Significant
5	0.603**	Significant	15	0.565**	Significant
6	0.391*	Significant	16	0.699**	Significant
7	0.697**	Significant	17	0.579**	Significant
8	0.671**	Significant	18	0.521**	Significant
9	0.488**	Significant	19	0.455**	Significant
10	0.389*	Significant	20	0.301**	Significant

* Significant at the level 0.05 and less.

** Significant at the level 0.01 and less.

From table No. (2), it becomes clear that all the items of the achievement test are significant at the level (0.01), while some of them are at the level of significant (0.05). Accordingly, it becomes clear that all the items composing the test have a high degree of validity, which makes it suitable for field application.

Field study:

- 1- The pre-application of the achievement test to use the generative model, while the female students in the control group were taught in the traditional method.
- 2- The proposed unit was studied for the female students of the experimental group.
- 3- Remote application of the test of learning synonyms and antonyms to the two research groups (experimental and control).

Results and their Discussion:

1- The answer of the first question:

What is the effectiveness of using the Generative Model in learning synonyms and antonyms in the English language course for second-grade secondary school students in Bisha governorate at the level of remembering?

In order to find out whether there are statistically significant differences at the level ($0.05 \geq \alpha$) between the mean scores of the experimental and control group students in the post application of the achievement test in the level of remembering, the researchers used (T) test for the independent sample. It was used to clarify the significance of the differences between the means of the experimental and control group in the post application of the test at the level of remembering. The results were as follows:

Table (3): The experimental and control group in the post-application of the achievement test at the level of remembering

Achievement test levels	Study Groups	Number of students	Mean of the Degrees	Standard Deviation	(T) Value	Degrees of Freedom	Level of Significance
Remembering Level	Control Group	24	2.88	0.947	5.264-	46	0.00* Function
	Experimental Group	24	4.67	1.373			

* Significant differences at the level (0.05)

Table (3) above shows the superiority of the experimental group over the control group in the post application of the achievement test in the level of remembering. The average scores of the experimental group in the achievement test at the level of remembering was (4.67), while the average scores of the control group was (2.88). The value of the total (T) was (5.264) at degrees of freedom (46), which is a statistically significant value at the level (0.05). Thus, the first hypothesis of the research, which states, “There is a statistically significant difference at the level (0.05) between the mean scores of the experimental group students and the scores of the control group students in the post application of the achievement test in the level of remembering in favor of the experimental group” was accepted.

This result is consistent with many previous studies that have proven the feasibility and effectiveness of the generative model in the educational process in general. It agreed with the Al-Saeedan, (2011) study, which found statistically significant differences between the averages of students' physical concepts acquisition due to the teaching strategy, and in favor of the generative learning strategy compared to the learning cycle and the usual method. It also agreed with Al-Sheikh, (2013) study, which indicated the effectiveness of the generative model in developing the skills of literary texts among students, and the size of the effect was great in the levels of arrangement: comprehension, interpretation, criticism, literal, taste, and then creative.

2- The answer of the second question:

What is the effectiveness of using the Generative Model in learning synonyms and antonyms in the English language course for second-grade secondary school students in Bisha governorate at the level of understanding?

To know whether there are statistically significant differences at the level ($0.05 \geq \alpha$) between the mean scores of the experimental and control group students in the post application of the achievement test in the level of understanding, the researchers used (T) test for the independent sample. It was used to clarify the significance of the differences between the means of the experimental and control group in the post application of the test at the level of understanding. The results were as follows:

Table (4): The experimental and control group in the post-application of the achievement test at the level of understanding

Achievement test levels	Study Groups	Number of students	Mean of the Degrees	Standard Deviation	(T) Value	Degrees of Freedom	Level of Significance
Understanding Level	Control Group	24	3.42	1,139	9.418-	46	0.00* Function
	Experimental Group	24	7,08	1,530			

* Significant differences at the level (0.05)

It is evident from table (4) that the superiority of the experimental group over the control group in the post application of the achievement test in the level of understanding. The average scores of the experimental group in the achievement test in the level of understanding was (7.08), while the average score of the control group was (2.42). The value of total (T) was (-9.418) at degrees of freedom (46), which is a statistically significant value at the level of (0.05). This indicated that the second hypothesis of the research, which states, "There is a statistically significant difference at the level of (0.05) between the mean scores of the experimental group students and the scores of the control group students in the post application of the achievement test in the level of understanding in favor of the experimental group" was accepted.

This result is in agreement with Al-Jamaan, (2013) study, which found statistically significant differences at the level (0.05) in the average achievement of the basic ninth grade female students in chemistry due to the teaching model and in favor of the experimental group that was studied according to the generative learning strategy. It also agreed with Abu Qadiri, (2016) study, which concluded that there are statistically significant differences between the arithmetic means of the post-measurement of achievement in chemistry in favor of the experimental group. The size of the effect was (68%), and the results showed that there were statistically significant differences between the arithmetic averages of the scores of the two groups in the achievement test in favor of the experimental group, and the size of the effect was (70%).

3- The answer of the third question:

What is the effectiveness of using the Generative Model in learning synonyms and antonyms in the English language course for second-grade secondary school students in Bisha governorate at the level of application?

In order to find out whether there are statistically significant differences at the level ($0.05 \geq \alpha$) between the mean scores of the experimental and control group students in the post application of the achievement test in the level of application, the researchers used (T) test for the independent sample. It was used to clarify the significance of the differences between the means of the experimental and control group in the post application of the test at the level of application. The results were as follows:

Table (5): The experimental and control group in the post-application of the achievement test at the level of application

Achievement test levels	Study Groups	Number of students	Mean of the Degrees	Standard Deviation	(T) Value	Degrees of Freedom	Level of Significance
Application Level	Control Group	24	1.46	0.509	9.903-	46	0.00* Function
	Experimental Group	24	3.29	0.751			

* Significant differences at the level (0.05)

It is evident from table (5) that the superiority of the experimental group over the control group in the post application of the achievement test at the level of application. The average scores of the experimental group in the achievement test at the level of application reached (3.29), while the average scores of the control group reached (1.46). The value of total (T) was (-9.903) at degree of freedom (46), which is a statistically significant value at the level of (0.05). Thus, the third hypothesis of the research, which states that “There is a statistically significant difference at the level of (0.05) between the mean scores of the experimental group students and the scores of the control group students in the post application of the achievement test in the level of application in favor of the experimental group” was accepted.

This result is in agreement with O. Qarareh's (2016) study that found statistically significant differences at the level (0.05) for the effect of the constructor of the learning model on the achievement and scientific thinking in favor of the experimental group. It also agreed with Lisnasari Andi (2017) study, which concluded that the students' achievement of learning before they are taught using the generative learning model with a strategy of writing-pair is in a very low category. However, the student's learning after teaching using the generative learning model with a writing-pair strategy is in a high category, and that the students' response was good for activities in the learning processes with the generative learning model.

4- The answer of the main question:

What is the effectiveness of using the Generative Model in learning synonyms and antonyms in the English language course for second-grade secondary school students in Bisha governorate at all levels?

To know whether there are statistically significant differences at the level ($0.05 \geq \alpha$) between the mean scores of the experimental and control group students in the post application of the achievement test in all levels, the researchers used (T) test for the independent sample. It was used to clarify the significance of the differences between the means of the experimental and control group in the post application of the test as a whole. The results were as follows:

Table (6): The experimental and control group in the post-application of the achievement test at all levels

Achievement test levels	Study Groups	Number of students	Mean of the Degrees	Standard Deviation	(T) Value	Degrees of Freedom	Level of Significance
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						Free dom	
Total score for the achievement test	Control Group	24	7.75	1.675	-12.341	46	0.00* Function
	Experiment al Group	24	15.00	2.341			

* Significant differences at the level (0.05)

Table (6) shows the superiority of the experimental group over the control group in the post application of the achievement test as a whole. The average scores of the experimental group in the achievement test as a whole (15.00), while the average scores of the control group reached (7.75). The value of total (T) was (-12.341) at degree of freedom (46), which is a statistically significant value at the level (0.05). Thus, it is possible to accept the fourth hypothesis of the research, which states that “There is a statistically significant difference at the level (0.05) between the mean scores of the experimental group students and the scores of the control group students in the post application of the achievement test as a whole in favor of the experimental group.”

This result is in agreement with Al-Masri (2016) study, which concluded that there are statistically significant differences between the experimental and control group in the achievement test as a whole in favor of the experimental group that studied according to the generative learning. It also agreed with the study of Al-Shammari (2018), which demonstrated the effectiveness of the generative learning model in developing some mathematical operations at the levels (comprehension, remembering, application, and overall degree).

Conclusion:

The present study investigated the effectiveness of the Generative Model in learning synonyms and antonyms in English language at Kingdom of Saudi Arabia. A random sample of (48) female students participated in this study. All participants undertook an achievement test consisting of four types of objective questions. Students were divided into two groups, a control group and an experimental group. They were exposed to the synonyms and antonyms that are part of the Saudi secondary second grade curriculum. The control group studied the synonyms and antonyms in the conventional way of teaching. The experimental group studied using the Generative Model. Four weeks later, a post-test took place for the control group as well as for the experimental group. While teaching the synonyms and antonyms for the experimental group a positive feedback was present and students expressed their enjoyment in dealing with the activities including synonyms and antonyms. They found themselves active all the time and enjoyed the creativity in learning the new words and generating short sentences. Results indicated that, there is a statistically significant difference at the level (0.05) between the mean scores of the experimental group students and the scores of the control group students in the post application of the achievement test as a whole in favor of the experimental group.

Recommendations:

Based on the findings of the research, the researchers recommend the following:

- 1\ The necessity to use the generative learning model in the educational process because of its proven effectiveness in developing the level of learning synonyms and antonyms for second-grade secondary school female students.
- 2\ The necessity to encourage teachers to use the generative learning model in the educational process.
- 3\ The necessity to provide the necessary technical environment to use the generative learning model in the educational process.
- 4\ The necessity to encourage female students to use modern technologies in the early educational stages, so that they can deal with these technologies and keep pace with current progress in all fields.

Suggestions for Further Researches:

In light of the objectives and results of the current research, the researchers propose the following studies and research:

- 1- Studying the effectiveness of the generative learning model in acquiring the skills of listening, speaking, reading and writing in different educational stages.
- 2- Studying the effectiveness of the generative learning strategy in developing the skills of criticism, analysis and innovative thinking in English literature.
- 3- Conducting descriptive studies on the obstacles of using the generative learning model in the educational process, in order to identify these obstacles, and develop appropriate solutions for them.

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