



Effectiveness of Modeling in Improving the Phonemic Awareness Skill among the First Grade Students

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This study aimed to show effectiveness of Modeling in improving the phonemic awareness skill among the first grade students in Irbid Qasabah Directorate of Education. The study sample consisted of (72) male and female students divided into two groups; the experimental group taught by using the social learning (modeling) and its number was (36) male and female students, and the control group taught by the traditional method and its number was (36) male and female students. An achievement test was developed where its reliability and validity were approved and applied to the sample. The statistical methods used by (SPSS) program were as follow: Two-Way ANNOVA, Independent t-test and standard deviation. The results of the study indicated that there were statistically significant differences due to the effect of the teaching method and for the experimental group taught by using modeling in improving the phonemic awareness skill. The superiority of modeling due to that it makes students the axis of the educational process, and gives them freedom to express their opinions without fear or hesitation which positively affect their achievement. There were statistically significant differences due to the effect of sex and for females and there were no statistically significant differences due to the effect of interaction between the group and sex. The results also showed there were no differences between the pre and post measurement.

Keywords: social learning (modeling), phonemic awareness, reading, first grade, skill

INTRODUCTION

Phonemic awareness skills are considered as essential indicators to develop reading abilities later; as there is a strong connection between oral language growth and vocabulary inventory development, and knowledge of sounds of letters and spelling

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skills (Pullen & Justice, 2003), and there is a group of factors affecting the phonemic awareness development such as the ability of hearing and students; capacity to pronounce words (Al-Hashimi & Mustafa, 2017).

Phonemic awareness with its components and elements is considered as a base and rule in teaching reading and the related skills which are as follows: dividing sentences into words, the words into syllables, rhymes and vocal combination and words into their sounds (Adams, et al., 1998). Phonemic awareness needs a direct teaching; thus, through planning its activities, we should integrate language within literary activities in order to strengthen the relation between the written and pronounced language, and deal with language as a whole and complete unit where it treats the different skills related to phonemic awareness currently with meaning (Al-Hashimi & Mustafa, 2017). The cognitive theory indicates a theoretical perception of teaching languages depends on conscious understanding of the language system as a condition to be mastered, and the linguistic efficacy precedes the linguistic performance and it is a condition to be occurred. This means that the learner should get a degree of conscious control on the major system of the language in order that its usage capacities are improved easily to the learner in natural positions; as learning the language based on this theory is a mental conscious process to acquire the ability to control the vocal, grammatical and lexical styles of language through analyzing these styles as they are cognitive contents. So, learning is a mental activity depends on the individual's innovative ability in using the little he learned in new positions (Abdul Kareem & Hbaiter, 2016).

The related definitions to phonemic awareness were varied among researchers, as (Al-Tijani & AL- Nasser, 2016) think that the concept of phonemic awareness pointed to the learner's possession a group of skills as the ability of to define the sounds of pronounced words, distinguish among these sounds, divide pronounced words to individual sounds, collect individual sounds to form words, analyze words into Phonemic syllables and divide words into phonemes. (Hashani ,2012) defined phonemic awareness as "the ability to treat the oral language by dividing words into small units such as a syllable, phoneme or search for rhyme and the ability of awareness of entity of phonemic structure in speech".

The phonemic awareness to child develops the rhyme awareness automatically and naturally when he reaches three years which helps him distinguish among sounds (Al-Tajani & Al-Nasser, 2016). When the child begins to distinguish among sounds, he started to understand the relation between a sound and optical symbol (letter) and this skill is essential in teaching reading (Al-Tajani & Al-Nasser, 2016).

The rhyme awareness makes it easy for a child to know words of similar sounds and consecutive letters. When a child learns classification of words based on their similar sounds and the phonemes sounds, it becomes easy for him to move to later stages. Therefore, the two researchers decided to build a group of exercises depending on the stage education and reading skill development stages to child through the following images (Olimat, 2018):

The first stage: The previous preparation stage for a child, which is the stage of identifying the different sounds and their types and the first letter's sound of a word.

The second stage: The syllables learning stage, where the child learns syllables then analyzing words into syllables. This stage begins in the category of (3-4) years old, and it's called the early phonemic awareness stage (Bentin, 1992), which means the ability to analyze words to syllables, and this skill is necessary to move to the third stage.

The third stage: The real phonemic awareness development stage, where the phonemic units are analyzed in which the word is consisted of or integrated them together to form a word. This skill is acquired at the age of (6-7) years which is the old category where a child begins to learn the alphabets. In this stage the child learns to distinguish letter according to their phonemes, then analyze a word based on its phonemes as this skill helps a child to understand the relation between a sound and symbol and makes it easy for him to acquire reading. A child in preschool (5-6) is able to Synthesize and analyze syllables (Olimat, 2018).

The study problem and questions

The study problem lies in the students' inability to listen well and manipulate the sounds such as deletion, addition and replacement of sounds. It also lies in researching the strategy of modeling and its relation to the phonemic awareness skill and reading ability among students, difficulties facing students in reading ability of phonemes, syllables and words and inability to integrate sounds to form, analyze and synthesize words. Therefore, this study came to limit the difficulties of reading among students. The study answered the following question: are there any statistically significant differences at ($\alpha=0.05$) of Modeling in improving phonemic awareness skill among first basic grade students in Irbid Qasabah Directorate of Education due to students' sex (male, female) and the teaching method.

The study objectives

The study aimed to achieve the following:

Identify effectiveness of modeling in improving phonemic awareness skill among first grade students in Irbid Qasabah Directorate of Education.

Identify the statistically significant differences of effectiveness of modeling in improving phonemic awareness skill among first grade students in Irbid Qasabah Directorate of Education due to the students' sex (male, female).

Importance of study

The importance of study lies in the shortage of studies that researched in the strategy of modeling and its relation to the phonemic awareness skill and reading ability among students, difficulties facing them in reading ability of phonemes, syllables, words and inability to integrate phonemes to form, analyze and synthesize words. Social Learning Theory can be used in developing educational curricula in activating learning through observation. Lower primary stage and Arabic language teachers may benefit from this study through providing them with a new strategy in teaching Arabic language which it is hoped will bring about a qualitative change in teaching reading and imparting phonological awareness skills to the early childhood stage students. It can also benefit the educational supervisors when holding educational meetings and training courses to teachers on proper strategies and methods to teach Arabic language and reading, and

this study may provide a list of proper phonemic awareness skills of the early childhood stage. It also provides those who are in charge of training the Arabic language teachers and first three grades (in service) with strategies of learning phonemic awareness skill to build teachers training programs to familiarize their student how to use them.

Limits of study

This study is restricted to the following limits:

- Subjective limit: This study dealt with the degree of effectiveness of modeling in improving phonemic awareness skill among first grade students in Irbid Qasabah Directorate of Education.
- Spatial limit: This study was applied to Irbid Qasabah Directorate of Education because of facilities provided by the directorate to apply the current study.
- Human limit: This study was applied to first grade students to Irbid Qasabah Directorate of Education.
- Time limit: The current study was applied in the first semester of the academic year 2018/2019

Procedural definitions

- Modeling: A mental perception of relations that connect things, phenomena or events using simulations or imitation forms which makes their explanation, interpretation and prediction easy, and modeling is completed by description or explanation of concepts or phenomena which are difficult to be learnt by direct experience (Al Manakhreh, 2017). The two researchers defined it as the strategy based on acquisition first grade students the phonemic awareness skills of distinguish and integrate phonemes through imitation, modeling and reinforcement.

- Phonemic awareness: it is defined terminologically as the ability of listening, identifying and manipulating (deletion, addition, replacement) of phonemes (silences and voices), which is a previous requirement to children's learning of reading; since it trains learners on how phonemes work in structures and sentences of a language as every language id based on a group of phonemes (Fayyad, 2021).

It is procedurally defined as the whole and minor degrees of the study tool dimensions which a student got when applying (Fayyad, 2021).

-Reading: A cognitive process which requires deriving the meaning from a written text and analyze its symbols optically to reach recognition of words, comprehension, attention, understanding, memorizing and fluency (Al-Jafari,2018).

First basic grade: It is the grade that represents the first educational stages in Jordanian educational system and indicates pointed to (6) years (Yaghmour & Obaidat, 2016).

Theoretical framework and related studies

Theoretical framework

Learning is considered one of the most important subjects that attracts the researchers' attention in various specializations in order to identify this complex human

phenomenon through reaching laws that rule them which contributes in investing and employing them in different life situations especially the social and educational ones. The importance of learning lies in that it is a process where an individual acquires new behavior patterns and several cognitive and emotional skills that help him in adapting with his social and internal environment and facing the surrounded challenges and dangers. Several learning theories emerged that aim to introduce a better and deeper understanding of the human behavior. The Social Learning Theory or learning by modeling emphasized the importance of social interaction and standards, context and social conditions in learning occurrence, which means that learning isn't occurred in space but in a social surrounding (Mohammed, 2011).

Origin of the theory and its most prominent pioneers

The first attempt in this aspect that was formulated by (Miller and Dollard) who were among the most prominent people of the Modern Behavior School in their famous book (Social learning and simulation) in 1941. In this book the two authors tried to make a balance between the principles of behaviorism and psychoanalysis (Al-Khazalah, 2014). Then it was formulated by Julian Rouser in his book issued in 1954 entitled (Social learning and Clinical Psychology) where he confirmed the concept of reinforcement. After that, Howard Kili developed the previous attempts in 1967 in building what is called "The Theory of Due" in interpreting social behavior (Abu Hatab & Sadeq, 1999), but the favor in developing a lot of thoughts in this theory refers to the two psychologists (Bandura & Walter) where they confirmed in it the principle of reciprocal determinism in the learning process according to interaction among three major components: behavior, limitations linked to a person and environmental limits. Thus, behavior based on this equation is a function of a group of previous and next learnt limits where every group contains cognitive variables (Al-Zaghloul, 2013).

Bandura introduced a research entitled (Social learning through simulation, then he shared Walters in publishing a book with an address (Social learning and personality development). These two books became the reason of the researching about simulation in the next decade. Thus, Bandura thinks that most of human behavior is learnt by following a model or real live example but not through classic or procedural conditioning processes; therefore, by observing others an idea is developed about forming a behavior (Mohammed. From his viewpoint, the social learning means that information we obtained from observing things and behavior of those around us that affect our method of action (Outom, Al-Jarrah, & Abu Ghazal, 2014).

Mohammed (2011) explained what is meant by social learning as the individual's acquisition or learning new responses or behavioral patterns through a social framework or position; as most of human behavior is learnt by observing whether by accident or intention. Thus, the small child learns talking by listening to and imitating others speech. If learning of language was completely depending on adaptation or classical or procedural conditioning, this mean we won't achieve the goals of teaching. The theory was known by other names such as the theory of learning by observation and imitation, modeling or social learning, which was among the syncretism theories, because it was a join between the behavioral and cognitive theories, as in social learning where all of

external reinforcement and internal interpretation of learning was used (Al-Shahawi, 2016). This theory is based on three major concepts which are:

1. Behavior Potential

Router defined behavior potential as “The potential capacity of any behavior occurred in any position or more than one position as it is considered to any shape or a group of shapes of reinforcement. This relative concept pointed to the possibility of human response – in a way- accompanied with the alternative behavior patterns and countless several behavior patterns range between a smile to and insult, from repression to dropping and from thinking to planning.

2. The concept of expectancy

It is a type of self-probability, which indicates that probability isn't determined with certainty but it is influenced by many factors such as people's way in classification events, generalization of previous results and determine of reasons. Router defined expectancy as “Possibility that the human sets for the events of limited behavior which he will perform in a definite position or positions”.

3. Value of reinforcement

It is a relative expression which pointed to that the human prefers something than another. Router thinks that the value of reinforcement is the preference degree of a person and his desire to obtain an appreciation.

Abu Asa'ad (2011) thinks that the effective factors in motivation of imitating a model or not can be summarized in the following points:

- Factors related to the observed individual, and among them are (chronological age, mental readiness, appreciation of the model's social and scientific status, personality attraction and psychological relief of a model).
- Factors related to the observed model such as (social status- fame- type).
- Factors related to environmental conditions or position limits.

Al-Zaghloul (2013) also explained that learning by observation requires availability of interaction chances with models, and this interaction may be direct like the daily life positions or indirect through different mass media and other resources as follows:

First: Direct interaction with real people in the fact life: many behavior patterns and experiences are taken place through direct daily interaction where individuals acquire these patterns through observing live models in the environment; we learn through interaction with parents, family members, peers and community members where we live. For example, we find children learn a lot of behavior patterns through imitation of their parents' behavior and family members they live with, and they also exemplify their gender characteristics, social roles and motor skills through interaction with others. Whereas learning language, dialect and other verbal skills are learnt by individuals directly through interaction with community members where they live.

Second: Indirect interaction which is represented in different mass media. Through these mans it is possible to learn a lot of behavior patterns, as such these means are

considered as effective media tools in behavior. Learning occurred by TV and cinema through exemplification by images. Evidence indicate that the shapes of explanation depending on physical material or images are considered to be more ability to transfer larger information size compared to shapes depending on verbal description. There are some skills where speech symbols convey more information than representations of material and images as in learning a language and dialect.

Many study results indicated that TV forms an important resource to learn behavior patterns particularly violence and aggressive behavior. Thus, as what have appeared in the previous experiences results of modeling, it is observed that children learnt the aggressive behavior aspects through watching live or cartoon TV films.

Third: There are other indirect resources through which some behavior patterns can be exemplified. As such these patterns are considered to be exemplified by a symbol and image on a specific pattern, where among these resources are stories, religious and literary novels and through the processes of historical and legendary characters' exemplification. Al-Zaghloul (2013) thinks that it is possible to use the learning procedures by modeling in learning and teaching positions as follows:

First: Improving habits, values and trends among teachers through:

- The teacher must be a model through practicing habits and values.
- Using models of students who practice such these habits and values and reinforce them for that in front of others.
- Using films that include materials related to those values, habits and trends.
- Using stories, novels and purposeful biographies that ensures providing perfect models for learners.

Second: Improving professional, artistic and sport skills. They are related to teaching academic courses through using direct and indirect models such as people, films and images.

Third: Modification behavior among individuals. It is done through stopping or removing some behaviors among individuals when watching models performed behavior and they were punished for that, or positive behavior models that were rewarded. Many studies showed students are influenced by their teachers' behaviors and actions more than words and advice particularly when both of them contradict (Al-Sheikh et al., 2011).

The test of reading skills has proven to be very useful because it contributes to the most effective training of the student's cognitive activity, in the face of the need to understand and interpret the content of the text as deeply as possible; Different tests include tasks of different sizes, varying in difficulty and language specifics; Test reading is the best method for examining the language skills developed during e-learning, which has been proven by its ubiquitous use in language proficiency tests (Rimma & Andrey, 2022).

In addition, the researchers pointed out that reading includes many sub-skills, where the sub-skills are "perceiving the language text", inferring the meaning and use of unfamiliar lexical elements, understanding "explicitly stated information", and

implicitly stated information. . Reading is an activity that also includes “predicting”, “previewing” and “anticipating” because the aim of prediction is to train students to “guess when reading a text”, and it indicates that the more students look forward to reading and anticipate in their minds what the text might have in store for them, It will be easier to understand the main points of the passage” (Yaghmur & Obeidat, 2022).

When we read a text, there must be concentration, because reading cannot be regarded as simply looking at any paragraph in a book and remembering it. At this point, we also need to analyze the skills during the reading process to get the details from the document we are interpreting. We need to recognize the important thing in the reading process (Yaghmur & Obeidat, 2022).

Related Studies

There are many studies that dealt with strategy of modeling and phonemic awareness skill among students, from these studies is a study by Al-Shamari (2018) which aimed to show the role of educational modeling in improving the level of professional creation among the basic stage teachers in Kuwait from their viewpoint in light of some variables. The study adopted the descriptive method and depended on the questionnaire as a tool for collecting data. The study community consisted of all of the basic stage teachers in Kuwait, while the sample restricted to (981) male and female teachers. The study results showed the degree of approval on most of the domains was (high) from the study sample viewpoint, and it agreed with this study that showed the superiority of the modeling strategy in developing phonemic awareness and its impact on students.

A study by Al-Khasawneh et al. (2018) aimed to reveal the effect of a training program based on phonemic awareness skills in improving the skill of auditory recalling for people with learning difficulties in Asir area. The study sample consisted of (40) students, and the quasi-experimental design of the two experimental and control group was adopted. The results showed there were statistically significant differences in the auditory recalling skill due to classroom variable. The results also showed the continuity of the effect of phonemic awareness program in improving auditory recalling skill for people with learning difficulties in Asir area.

Olimat (2018) conducted a study aimed to measure the extent of effectiveness of a computerized training program to improve phonemic awareness to increase reading and writing ability among a sample of gifted students of learning difficulties in light of the age variable (6-9) years. The study sample consisted of (60) students, where the pronouncing and phonologic disorders measurement and the computerized training program to improve phonemic awareness skills were applied. The results showed statistically significant differences in the performance of gifted students of learning difficulties for the experimental group. The results also showed there were differences in the post-test due to the age variable in the level of phonemic awareness for the age category (8-9) years.

A study by Dawoud (2017) aimed to identify the effectiveness of modeling strategy in improving public speaking skills and verbal self –concept among Faculty of Sharia students. The researcher prepared a performance test, an observation card of the public speaking skills, measurement of verbal self -concept and the teacher’s guide of using

modeling strategy, where he applied its tools on (65) students of Faculty of Sharia and Islamic studies in Qassim University. The results of the study showed the effectiveness of modeling strategy in improving public speaking skills and self-concept between the study sample, and excellence of the experimental group students on the control ones.

Rababah (2017) conducted a study aimed to investigate the effect of using activities of written expression and story reading in improving phonemic and printed materials awareness among preschool children in Jordan. The study sample consisted of (50) students of a governmental kindergarten in Irbid where it was distributed into two experimental and control groups, and each group included (25) students. The experimental group was involved in (24) periods through which reading stories in groups with concentration on the rules of the printed materials was taken place. They were also involved in activities of written expression once a weekend for (14) weeks. The results of the study indicated that there were statistically significant differences in the awareness degree of printed materials and phonemic awareness for the experimental group, as this agrees with this study, which showed that there were statistically significant differences in favor of the modeling strategy in developing phonemic awareness. The two studies also agreed in developing the phonemic awareness skill. This study disagrees with the study of Al-Rababah (2017) in that it measured the effectiveness of modeling, while the study of Al-Rababah showed the effectiveness of stories and expressive activities.

A study by Abdel Kareem (2016) aimed to verify the effectiveness of behavioral treatment program based on modeling strategy in reducing attention deficit hyperactivity disorder in primary school children. In order to achieve this objective, the researcher adopted the experimental method. The study sample consisted of (30) children, where (10) of them to measure the effectiveness of the first part of the treatment program dedicated to pattern of attention deficit control, which was divided equally into two experimental and control groups, and (10) children to measure the effectiveness of the third part of the program dedicated to the complex pattern controlled by attention and hyperactivity deficit and impulsivity that is divided equally into two experimental and control groups. The study also depended on the diagnostic form derived form of the fourth statistical guide of psychological disorders and attention and hyperactivity deficit measurement (Al-Yahmadi, 2014), in addition to designing a treatment program based on modeling strategy. The results of the study indicated effectiveness of the treatment program in reducing attention and hyperactivity deficit among children whose age were from (7-9) years, and the effect size of each part was large.

A study by Fathallah (2011) aimed at identifying the effect of teaching by modeling and its tracking with role playing in improving conceptual comprehension and trend towards chemistry among pupils of learning difficulties in the middle stage in KSA. To achieve the objective of the study, it required to define a list of learning difficulties of concepts and chemical relation in the third grade of the middle stage with the personal study sample which was (268) students. The study sample consisted of (93) students. The results of the study showed chemical concepts and relations form a difficulty in their learning among the third grade of the middle stage, there were statistically significant

differences among the students of the three groups in conceptual comprehension and trend measurement towards chemistry for the two experimental groups and there were differences among the students of the two experimental groups in the conceptual comprehension and trend measurement towards chemistry for the second experimental group studied by the method of roles playing followed by modeling.

Odallah (2011) concluded a study aimed to build an educational program based on modeling strategy and test its effect in acquisition life concepts and improving meditative thinking among the upper basic stage female students in Jordan. To achieve this objective, the study adopted the quasi-experimental method. The study sample which was selected randomly consisted of (22) female students of Shajarat Al-Durr Basic School distributed into two sections; the experimental section studied the text educational content for the basic ninth grade by the educational program based on modeling strategy and a control section studied the same educational program by the usual method. The study roles were represented in an achievement test of the life concepts and a test for meditative thinking. The results of the study showed statistically significant differences due to the educational program based on modeling strategy and they were for the experimental group in the post application of the life concepts and meditative thinking test, which emphasized the effect of modeling strategy in acquisition life concepts and improving the meditative thinking test.

Comments on the previous studies

It was observed through dealing with the previous studies that there was no study that dealt with the effectiveness of modeling in improving phonemic awareness skill. It was benefited from the previous studies and literature review in formulating the introduction and the literature review, and identifying the results showed by the studies and conveyed them to teachers in the field to be adopted and practiced. It was observed that all of the studies were similar to this study in dealing with the experimental method such the study of (Al-Shamari, 2018; Al-Khasawneh et al., 2018)) and showing the effectiveness of modeling strategy.

METHOD

To reveal the level of effectiveness of modeling strategy in improving phonemic awareness skill among the first basic grade in Irbid Qasabah Directorate of Education, the descriptive and inferential methods (2×2 experimental design) since they suit the nature of this study.

Participants

The study community consisted of all of the first basic grade students in Irbid, Qasabah Directorate of Education, and the study sample consisted of (72) male and female students selected randomly. The random assignment of the study sample was done to two groups: a control group consisted of (18) male students and (18) female students, and an experimental group consisted of (18) male students and (18) female students studied by using Modeling in improving phonemic awareness skill to increase the reading ability, while the control group studied by the usual method, where the sample

was selected from the first grade students because of the students' weakness in the Arabic language skills, especially the phonemic awareness skill.

Table 1

The distribution of the study sample individuals based on the variables of (sex, group)

Variables	Level	Frequency	Percentage
Control	Male	18	50%
	Female	18	50%
Experimental	Male	18	50%
	Female	18	50%

Table 1 showed the distribution of the study sample individuals based on the variables of (sex, group), where the number of males in each group was 18 male students and 18 female ones with a percent of 50% for each.

Validity of the test

The test in its primary image was introduced to a group of experienced and qualified arbitrators in the area of measurement and evaluation, Arabic language teaching methods and educational supervisors and teachers, whose number was (12) to give their opinion about linguistic formula of items, the items of the test properness to the goal of the test and suitability of items to the levels of the objectives. Their opinions and suggestions were taken into consideration and made what is essential such as deletion and amendment; the two researchers adopted (80%) of the arbitrators agreement on the item correctness.

Constructive validity

To identify the range of harmony among the items of the test and the test as a whole, it was applied to a survey sample consisted of (15) male and female students outside of the study sample, where the correlation coefficients were calculated between each paragraph and the test as a whole using the Pearson correlation coefficient where it should be positive, not less than 0.30 and statistically significant for the test to have a degree of validity (Hassan, 2006).

In order to verify the indications of the constructive validity of the test, it was applied to a survey sample consisted of (15) male and female students outside of the study sample and from the community itself so as to make sure of harmony among items of the test, and as a whole, where Table 2 explains that.

Table 2

Constructive validity coefficient (correlation between every item and the test as a whole)

No.	Item correlation to test as a whole	No.	Item correlation to test as a whole
1	0.431	8	0.562
2	0.817	9	0.796
3	0.648	10	0.401
4	0.620	11	0.623
5	0.584	12	0.531
6	0.585	13	0.750
7	0.497		

Table (2) showed all of the correlation coefficients between the items of the test and the test as a whole ranged from (0.796- 0.401), and this indicated correlation between the items and the test as a whole, and they were significant and accepted ones for the goals of the study.

Reliability of the test

The two researchers applied the steps of reliability to a sample reached (15) male and female students outside the study sample by calculating (Cronbach's Alpha) of the questionnaire, where it was (0.853), and it is a high ratio and indicated the reliability of the study tool.

Difficulty and distinguish coefficients of the test

To make sure of the validity of the test, difficulty and distinguish coefficients of all items of the test and the test as a whole were extracted, and Table 3 explained that.

Table 3

Difficulty and distinguish coefficients of the test of all items and the test as a whole

No.	Difficulty coefficient	Distinguish coefficient	No.	Difficulty coefficient	Distinguish coefficient
1	0.72	0.67	8	0.73	0.70
2	0.68	0.63	9	0.69	0.66
3	0.70	0.68	10	0.66	0.63
4	0.67	0.63	11	0.62	0.58
5	0.63	0.60	12	0.63	0.59
6	0.61	0.55	13	0.67	0.62
-	0.63	0.62		0.67	0.63

Table 3 showed difficulty coefficients of the items of the test ranged between – 0.61) (0.73, and the difficulty coefficients of the test as a whole was (0.67) which indicated a medium difficulty degree and it was proper to apply the test.

While distinguish coefficients which indicated the ability of items of the test to distinguish between the weak group and the strong one in achievement ranged between (0.70 – 0.55), and the distinguish coefficient of the test as a whole was (0.63) which indicated an accepted distinguish ability for the purposes of test application, where the test is considered to be accepted if the distinguish coefficient exceeded (0.30). (Hassan, 2006).

Equivalence between the two groups

To ensure the equivalence of the two groups on the pre measurement, (Two-Way ANOVA) was applied to show the differences between the two experimental and control group in the pre measurement.

Table 4

Results of Two-Way ANNOVA test to show the differences based on the two variables of group and sex in the pre measurement

Source of variation	Sum of squares	Degrees of freedom	Average of squares	(F) Value	Statistical significance
Group	0.089	1	0.089	0.267	0.607
Sex	0.414	1	0.414	1.236	0.270
Group*Sex	0.487	1	0.487	1.454	0.232
Error	22.784	68	0.337		
Total of corrected	23.775	71			

Table 4 showed no statistically differences between the two variables of the group and the pre measurement, where F value was (1.228) with a significant level (0.272) which was a value more than (0.05), where F value was (1.454) with a significant level (0.232) which was a value more than (0.05) for the interaction between the Group and sex.

The study procedures

The study was completed according to the following procedures:

- Preparing an achievement test that suit the students, required material and educational objectives in the text book.
- Obtaining a letter directed from Irbid Qasabah Directorate of Education to the related school principals to the study, coordinating with the two schools administrations to conduct the study, implementing the lessons through modeling to the experimental group, implementing the lessons by the usual method to the control group and coordinating with the first basic grade teacher in the two schools to conduct the study.
- Defining the study community and individuals, where the individuals were divided into two groups: the experimental consisted of (18) male students and (18) female students studied by modeling, and the control group consisted of (18) male students and (18) female students studied by the traditional method.
- The modeling strategy was started on the study sample for two months with two periods in a week with a total of (18) periods and (45) minutes for the single period.
- The equivalence of the two experimental and control groups was taken into consideration concerning experience, efficacy and the ability to teach.
- The study post -test was applied, where the time was limited in (45) minutes to measure the development of the experimental group students directly after finishing of implementation of the educational material.

Variables of the study

1. Independent variables:

-Teaching method which has two levels: social learning (modeling) and the traditional method.

- Sex which has two levels: male and female.

2. Dependent variables:

- Post achievement of the effectiveness of modeling in improving phonemic awareness skill to increase the reading ability to first grade students in Irbid Qasabah Directorate of Education.

Statistical treatment

The statistical methods were used using (SPSS) program were as followed: Two-Way ANNOVA Test to ensure the equivalence of the two experimental and control groups, means and standard deviation of the two pre and post measurement based on the two variables of group and sex, Independent t-test to find the differences between he means of each of the group and sex in the post measurement and ANNOVA to show differences between the experimental group and the control one in the post measurement.

FINDINGS

The following is the study results and their discussion based on its hypothesis:

Null hypothesis

There are no statistically significant differences of the effectiveness of modeling strategy in improving phonemic awareness skill to increase the reading ability among the first grade students in Irbid Qasabah Directorate of Education due to their sex (male, female) and the teaching method.

Alternative hypothesis

There are statistically significant differences of the effectiveness of modeling strategy in improving phonemic awareness skill to increase the reading ability among the first grade students in Irbid Qasabah Directorate of Education due to their sex (male, female) and the teaching method.

In order to test these hypothesis, the arithmetic means of the two pre and post measurements were extracted based on the two variables of group and sex, adjusted means and using (ANCOVA) to show the differences between the two experimental and control groups in the post measurement with the pre measurement as accompanying variable. The results of the study are as follow:

Table 5

Means and standard deviations of the two measurements (pre – post) and amended means based on the two variables of group and sex

Variable	Pre		Post		
	Mean*	Standard deviation	Arithmetic mean	Standard deviation	
Group	Control	3.29	.51	4.56	.21
	Experimental	3.36	.64	4.75	.18
Sex	Males	3.25	.65	4.58	.21
	Females	3.40	.49	4.73	.19

Table 5 showed virtual variances between the two pre and post measurements of the experimental and control group, where the arithmetic mean for males and females in the pre-test was 3.25 and 3.40 respectively, and the arithmetic means to the same order of sex in the post-test was 4.58 and 4.73 respectively.

The arithmetic means of the experimental and control group in the pre-test was 3.29 and 3.36 and the post-test was 4.56 for the control group and 4.75 for the experimental group.

To reveal the statistically significance of these differences, the accompanying variation analysis (ANCOVA) was applied, and extract the effect size through the value of (Eta Square), and Table 6 explained this.

Table 6

Results of the accompanying variation analysis (ANCOVA) to reveal variances between the two experimental and control groups in the post measurement with the accompanying pre measurement and measure the effect size

Source of variation	Sum of squares	Degrees of freedom	Average of squares	(F) Value	Statistical significance	Eta
Group	0.612	1	0.612	18.913	000.0	0.438
Sex	0.394	1	0.394	12.165	001.0	0.357
Pre	0.007	1	0.007	0.202	0.655	0.385
Error	2.200	68	0.032			
Total of corrected	3.243	71				

Table 6 showed the differences between the variable of group and post measurement is statistically significant, where F was (18.913) with a significant level (0.000) which was a value less than (0.05), and these differences due to the experimental group with an arithmetic mean (4.75) which was more than the mean of the control group, and Eta reached (0.438).

DISCUSSION

First: There are statistically significant differences of the effectiveness of modeling strategy in improving phonemic awareness skill to increase the reading ability among the first grade students in Irbid Qasabah Directorate of Education due to their sex (male, female) and the teaching method.

The superiority of modeling due to that it makes students the axis of the educational process, and give them freedom to express their opinions without fear or hesitation which positively affect their achievement, and modeling is one of the modern teaching methods which increases the teacher's freedom during the lesson, and create positive trends towards following up the lesson and respect opinion. The abundance and variety in addressing ideas helped to offer an interesting atmosphere among students which might be proper to modeling which led to an increase in students' achievement in those subjects.

This study agreed with the study of (Dawoud, 2017; Abdel Kareem, 2016), which showed the superiority of the experimental group studied by modeling strategy.

Second: Differences between the variable of sex and post measurement are statistically significant, where F value reached (12.165) with a significant level (0.001) which is a value less than (0.05), and these differences refer to females with a mean (4,73) which is more than the mean of males, and the effect size was (0.357). The due this result to that female students are introduced to an educational environment of more discipline concerning the classroom environment and teaching methods particularly in classrooms that taught by female teachers; since the educational environment where female students study is less in punishment and more enthusiasm especially if education is done by male teachers where male students face tougher punishments than females, and

follow up and organizing work differ between male and female students, as there was more concentration on follow up and organize work when dealing with students, and no previous study dealt with the variable of sex. All the previous studies didn't deal with the variable of gender, which gives this study its importance.

Third: The table also showed no differences between the pre and post measurement, where F value was (0,202) with a significant level (0.655) and the effect size was (0.385). This result is due to the equality between the two sexes in the available opportunities that this study provided, and they were exposed to the same conditions and changes that suit this study, in addition to that the teaching methods used paid attention in improving the students' skills and their various abilities, as all of them seek to increase the students' achievement.

RECOMMENDATIONS

The study recommended the followings:

- The need to benefit from the study results when preparing the training and educational for students of different stages.
- Preparation studies concerning with modeling strategy for other grades and stages.
- Including the modeling strategy within the strategies which are used and activated in the early childhood.
- Including the strategy within strategies where teachers train on.
- The need to concentrate on reading comprehension skills and use modeling strategy in improving these skills.

REFERENCES

- Abdul-Kareem, A., & Habiber, I. K., (2016). Phonological awareness skills required for teachers of Arabic language from the point of view of the teachers of the Department of Arabic Language. *Al-Qadisiyah Journal of Human Sciences*, 19(1), 391-419.
- Abdul Kareem, b. M. (2016). *The effectiveness of a behavioral treatment program based on a modeling strategy in reducing attention deficit disorder and hyperactivity in primary school children*. Unpublished MA thesis, Abu Bakr Belqaid University, Tlemcen, Algeria.
- Abu Asa'd, A. A. (Ed.) (2011). *Modification of human behavior – theory and application*. Amman: Dar Al-Maseera for publishing, distribution and printing.
- Abu Hatab, F. & Sadeq, A. (Ed.) (1996). *Educational Psychology*. Cairo: Anglo-Egyptian Press.
- Adams, M., Foorman, B., Lundberg, I. & Beeler, T. (1998). *Phonemic Awareness in Young Children A Classroom Curriculum*. Paul Bookes Publishing.
- Al-Hashimi, A. & Mustafa, T., (2017). The effect of an educational strategy based on Montessori theory on the level of phonemic awareness among the first basic grade students in Jordan in light of the educational level of the mother. *An-Najah University Journal for Research (Humanities)*, 31(12), 2301-2328.

- AL- Khasawneh, M., al-Khawaldeh, M., & Abd al-Ahmad, F. (2018). The effect of a training program based on phonemic awareness skills on developing the skill of sequential auditory recollection for people with learning difficulties in Asir region. *Hebron University Research Journal*, 13(1), 27-40.
- Al-Khaza'lah, M., Al-Shaqsi, A., Al-Sakhni, H., & Al-Shweiki, A. (Ed.). (2011). *Theories in education*. Amman: Dar Safa for printing, publishing and distribution.
- AL- Zaghloul, E. A. (Ed.) (2013). *Learning theories*. Amman: Dar Al-Shorouk for Publishing and Distribution
- Al-Jafari, H. M. (2018). The effectiveness of the modeling strategy in developing the skills of reading aloud among primary school students. *Scientific Journal of the Faculty of Education - Assiut University*, 34(10), 626-645.
- Al-Manakhrah, H. B. (2017). The effectiveness of a writing modeling program in developing writing skills among students of King Abdul Aziz University. *Journal of Educational and Psychological Sciences*, 18(2), 613-644.
- Al-Shahawi, M. M. (2016). The effectiveness of a counseling program based on the theory of social learning in improving some daily life skills among mentally handicapped children who are able to learn. *Journal of faculty of Education*, June (20), 593-620.
- Al-Shammari, O., Al-Kandari, K., & Al-Qattan, H. (2018). The role of educational modeling in improving the level of professional creativity skills among primary school teachers in Kuwait from their viewpoint in light of some variables. *Journal of faculty of Education - Al-Azhar University*, 37(180), 827-897.
- Al-Tijani, B. A., & Al-Nasser, A. (2016). Phonemic awareness for people with learning disabilities: A comparative study in the field of learning difficulties, reading between normal students and those with learning difficulties. *Algerian Journal of Childhood and Education*, 4(2), 9-30.
- Bentin, S. (1992). *Phonological awareness, reading and reading acquisition: A survey and appraisal of current knowledge*. In: R. Forst & L. Kats (Eds.). *Advances in psychology: orthography, phonology and meaning*. Elsevier, North Holland.
- Dawoud, S. H. (2107). The effectiveness of the modeling strategy in developing public speaking skills and linguistic self-concept among students of the Faculty of Sharia. *Journal of Educational and Psychological Sciences*, 18(4), 266-302.
- Fathallah, M. (2011). *The effect of teaching by modeling and its follow-up with role-playing in improving conceptual understanding and the trend towards learning of chemistry among pupils with learning difficulties in middle school in the Kingdom of Saudi Arabia*. Unpublished MA Thesis, Umm Al-Qura University, Mecca, Saudi Arabia.
- Fayyad, H. M. (2021). The effect of a program based on phonological awareness in developing the skills of reading aloud among the hearing impaired students in the primary stage. *Journal of the Faculty of Education - Ain Shams University*, 45(1), 381-484.

Hassan, A. M. (2006). *Psychometric properties of measurement tools in psychological and educational research using SPSS*. Unpublished master's thesis, Riyadh: College of Education, King Saud University.

Hashani, S. (2012). Theoretical readings about the problem of the relationship of reading to phonological awareness. *Journal of Psychological and Educational Studies*, Qassidi Merbah University - Wargla - Algeria, Is. December 9th, 100-126.

Mohammed, M. (Ed.). (2011). *Theories of learning*. Riyadh: Al-Rushd Bookshop.

Odalla, E. (2011). *Building an educational program based on the modeling strategy and examining its impact on the acquisition of life concepts and meditative thinking among students among the higher basic stage in Jordan*, unpublished PhD thesis, Amman University for Graduate Studies, Jordan.

Olimat, E. M. (2018). The effectiveness of a computerized training program to improve phonemic awareness skills to increase the reading and writing ability among a sample of gifted students with learning difficulties. *Journal of Educational and Psychological Studies - Sultan Qabous University*, 23(2), 130-162.

Otom, A. A, S. Al-Jarrah, A., & Abu Ghazal, M. (Ed.) (2014). *Educational psychology theory and application*. Amman: Dar Al-Maseera for publishing, distribution and printing.

Pullen, P. & Justice, L. (2003). Enhancing phonological awareness, print awareness, and oral language skills in preschool children. *Intervention in School and Clinic*, 39(2), 87-98.

Rababah E. (2017). The Impact of Using Reading Storybooks and Writing Journal Activities on Print and Phonemic Awareness of Jordanian Kindergarten Children. *Journal of Educational and Psychological Studies- Sultan Qaboos University*, 11(4), 736-748.

Rimma, I. & Andrey I. (2022). Online Reading Skills as an Object of Testing in International English Exams (IELTS, TOEFL, CAE). *International Journal of Instruction*, 14(4), 713-732.

AL- Sheikh, T. & Akhras, N. (Ed.) (2011). *Educational psychology between concept and theory*. Riyadh: Al-Rushd Bookshop.

Yaghmour, K. S., & Obaidat, L. T., (2022). The Effectiveness of Using Direct Instruction in Teaching Comprehension Skill of Third-Grade Students. *International Journal of Instruction*, 15(2), 373-392.

Yaghmour, K. S., & Obaidat, L. T., (2016). The role of the story-telling method in developing the reading skill of first-grade students in the Directorate of Education of Bani Kinana, *An-Najah University Journal for Research - Human Sciences*, 30(9), 1877-1896

Zaghloul, E. A. (Ed.) (2014). *Principles of educational psychology*. Amman: Dar Al-Shorouk for Publishing and Distribution.