

The Effect of Using Mobile Phones on Developing Creative Reading Skills in English

أثر استخدام الهاتف المحمول في تنمية مهارات القراءة

الإبداعي في اللغة الإنجليزية

ندى نايف نجم

Neda Nayef Najm

nedanayef11@gmail.com

المخلص باللغة العربية

هدفت الدراسة الكشف عن أثر استخدام الهاتف المحمول في تنمية مهارات القراءة الإبداعية في اللغة الإنجليزية لدى طلاب المرحلة المتوسطة، ولتحقيق هدف الدراسة تم بناء اختبار للقراءة الإبداعية مكون من (١٠) أسئلة تقيس مهارات الطلاقة والمرونة. تكونت عينة الدراسة من (٥٣) طالباً وطالبة من طلاب الصف الثالث المتوسط، تم اختيارهم عمدياً لسهولة تطبيق الدراسة عليهم، حيث تم اختيار الفصلين عشوائياً، وتم تقسيم عينة الدراسة إلى مجموعتين: تجريبية وضابطة، بإجمالي (٢٤) طالباً وطالبة في المجموعة التجريبية، تم تدريسهم باستخدام الهاتف المحمول، و(٢٩) طالباً وطالبة في المجموعة الضابطة، تم تدريسهم باستخدام الطريقة المعتادة الموضحة في دليل المعلم. وبعد انتهاء فترة التقديم أظهرت نتائج التحليل الإحصائي مجموعة من النتائج وهي كالتالي:

- توجد فروق ذات دلالة إحصائية بين أداء أفراد الدراسة في اختبار الطلاقة تعزى لمتغير استراتيجية التدريس لصالح أداء أفراد الدراسة الذين تم تدريسهم باستخدام الهاتف المحمول.

- توجد فروق ذات دلالة إحصائية بين أداء أفراد الدراسة على اختبار المرونة تعزى لمتغير استراتيجية التدريس لصالح أداء أفراد الدراسة الذين تم تدريسهم باستخدام الهاتف المحمول. وفي ضوء نتائج الدراسة الحالية يوصي الباحث بما يلي: توجيه المشرفين التربويين لتدريب المعلمين على استخدام الهواتف الذكية لتنمية مهارات القراءة الإبداعية لدى المتعلمين، وتحفيز المعلمين على اتباع الوسائل الحديثة مثل استخدام الهواتف المحمولة لتنمية العديد من المهارات الإبداعية وتنمية فهم المتعلمين لها وتوظيف مهارات القراءة الإبداعية في كتابة الكتب والقراءة والنصوص.

الكلمات المفتاحية: تأثير، الهاتف المحمول، القراءة الإبداعية، الطلاقة، المرونة

The study aimed to reveal the effect of using mobile phones on developing creative reading skills in English among middle school students. To achieve the study objective, a creative reading test was constructed consisting of (10) questions that measure fluency and flexibility skills.

The study sample consisted of (53) male and female students from the third intermediate grade, who were deliberately selected for ease of applying the study to them, as the two classes were selected randomly, and the study sample was divided into two groups: experimental and control, with a total of (24) male and female students in the experimental group, who were taught using the mobile phone, and (29) male and female students in the control group, who were taught using the usual method described in the teacher's guide.

After the end of the application period, the results of the statistical analysis showed a set of results, which are as follows:

- There are statistically significant differences between the performance of the study individuals in the fluency test attributed to the teaching strategy variable in favor of the performance of the study individuals who were taught using the mobile phone.
- There are statistically significant differences between the performance of the study individuals on the flexibility test attributed to the teaching strategy variable in favor of the performance of the study individuals who were taught using the mobile phone.

In light of the results of the current study, the researcher recommends the following: Directing educational supervisors to train teachers on using smart phones to develop creative reading skills among learners, and motivating teachers to follow modern methods such as using mobile phones to develop many creative skills and develop learners' understanding of them and employ creative reading skills in writing books, reading and texts. **Keywords:** *impact, mobile phone, theReadingCreativity, Fluency, Flexibility*

Background and importance of the study

introduction

Education is a fundamental pillar in an individual's life, and is greatly affected by the environment in which he lives. Education requires a variety of skills, and through it we can discover the creative abilities of students, nurture their growth and guide them towards the right path. It can also motivate them and accelerate their growth at times (Mulham, 2015).

Cellular devices are considered one of the elements that influence human behavior during the educational stages, as they contribute to shaping the individual's personality, and many different psychological theories emphasize the importance of the educational process in developing the individual's personality (Qanawi, 2019).

Recent studies indicate that mobile devices are one of the most prominent means that contribute to achieving comprehensive and integrated growth for students, especially in the context of the educational process, and especially in learning the English language, as these devices provide the mind with new information, skills and experiences through their various forms, which enhances the mental and cognitive abilities of students, and through them they acquire different thinking skills, in addition to developing higher mental functions such as memory, thinking and perception. (Sharif, 2011).

These experiences are considered practical sensory experiences, and represent an important dimension in the educational process and the organization of the environment that suits the students' abilities and potentials, as students learn and remember information related to these sensory experiences and scientific practices, while they find it difficult to remember or comprehend the information presented to them verbally or abstractly, and they enjoy direct interaction with the experience, which makes it easier for them to store it in memory and retrieve it when needed (Al-Muhajir, 2013).

Mobile devices play a vital role in enhancing individuals' ability to innovate. When we observe individuals playing, we find that they turn these activities into serious experiences in which they invest all their energy and interact deeply, whether it is by building blocks or forming sand models in the form of piles or structures, or even by observing a toy moving in front of them, and after pushing it, they deal with its movement with understanding and professionalism (Karmeddine, 2011).

Theories of cognitive and mental development confirm that cellular devices are the basic and most effective tool in the educational process, as they stimulate the individual's senses and contribute to his healthy physical growth, in addition to enhancing his language, mind, intelligence and thinking. Through the use of cellular devices, the individual can acquire complex scientific and mathematical concepts, in addition to developing his creative abilities (Jaber, 2013: 25).

Sutton Smith believes that the symbolic shifts that individuals adopt when they use mobile devices to learn English positively impact their mental flexibility. These shifts allow them to combine ideas in new ways, generating a range of innovative ideas and associations that can be drawn upon at any time for adaptive purposes (The Trick, 2016: 54).

1- Study problem

Based on the researcher's experience and observations as a student and teacher in English classes, as well as the experiences of others, it is clear that many EFL students face difficulties in using the language efficiently and effectively in real-life situations. The researcher believes that this problem may be due to the

traditional and artificial way of teaching English, which lacks the use of technology that gives students the opportunity to acquire the language and improve their authentic creative reading skills in real-life contexts.

Therefore, there are many modern methods that can be used to develop the learner's creative skills. Creative reading has been considered an important element that can be achieved through modern educational systems, through the use of many tools and means. One of the most important of these methods is the use of the mobile phone, as it is a suitable means that can be used in the application process to facilitate the process of creative reading.

Through the teacher's experience in teaching English in general, and teaching reading and texts in particular, he noticed weakness among students in various reading skills, especially in the skills of producing multiple and varied creative ideas from the text read, which created in the researcher a sense of the necessity of training students in fluency and flexibility skills in reading lessons through one of the educational methods that depend on students' interaction with it, which is their use of mobile devices that support the Internet.

2- Study question

Through the above, the current study attempts to answer the following question:

Study question Are there statistically significant differences at the level of statistical significance ($\alpha = 0.05$) between the arithmetic means of the study individuals' performance in both creative reading skills and in creative reading as a whole that can be attributed to the teaching method variable (using mobile phones and the traditional method)?

3- Purpose of the study

This study aims to identify the impact of cell phones on developing creative reading skills (fluency, flexibility) among third-year middle school students

4- Importance of the study

The importance of this theoretical study is determined by the importance of its topic, which is based on developing creative reading skills, through: Mobile phone method. The importance of the applied procedural study is as follows:

- With the aim of benefiting those concerned in the Ministry of Education, by training teachers on how to develop creative reading skills in the English language.
- Developing curricula according to different modern teaching methods such as: using mobile phones, and trying to integrate creative reading skills into the English language subject.
- The present study may be useful in training English language teachers to develop creative thinking and creative reading during their teaching, and help them provide a practical guide on how to use mobile phones in both visual and reading ways.

5- Operational Definitions

The study included key basic terms that must be defined practically, namely:

- Mobile phones: These are portable devices, including tablets, that operate using advanced and sophisticated operating systems that contain many applications and programs that can be used anywhere or at any time using an Internet browser and communicating with others and sharing information that can be obtained through wireless communications.
- Creative reading: It is a process in which the learner identifies with the text he reads the aspects of the subject and possible possibilities, and creates new relationships based on the information presented to him in the text, his previous experiences and his imagination (Abu Al-Azm, 1997). It is procedurally defined as the total score that the learner obtains on the creative reading test prepared for this purpose, which aims to reveal two skills, each skill includes a number of behavioral indicators, as follows:
 1. Fluency: is the learner's ability to read the text and his ability to provide the largest possible number of answers to the questions posed in a single reading text, within a fixed and specific period of time. Examples of fluency in reading texts include: the student reading the reading text and then giving more than one title for this text, or giving several alternatives that explain one of the concepts included in the reading text.
 2. Flexibility: It is the learner's ability to read the text and his ability to diversify his answers to the specific questions for a single reading text, within a fixed and specific time period. Examples of flexibility in reading

texts include: the student reading the reading text and then giving non-repeated titles for this text (diverse), or analyzing the reading text into basic and diverse elements and determining their dimensions.

6- Study limitations and limitations

This study falls within the following limits:

Human Frontiers: Third Intermediate Grade Abbasi Secondary School in the province Al-Hawija in Iraq

Spatial boundaries: Intermediate schools affiliated with the State of Iraq.

Time frame: The study was implemented in the first semester of the academic year 2024/2025.

Theoretical framework

The use of technology in education, especially in the teaching of English, has been a goal of many educators over the years. The use of technology in the learning and teaching of English as a foreign language (EFL) includes a variety of tools such as mobile technology, mobile-assisted learning (MALL), computer-mediated communication (CMC), computer-assisted learning (CAL), as well as CDs, DVDs, movies, webcams, iPads, iPods, computer-assisted language learning (CALL), data presentations, intranets, the Internet, multimedia, and more. These types of technology can be considered effective tools that contribute to improving the educational process (Taif, 2014).

Technology contributes to enhancing motivation, participation and interest among students when they use multimedia programs and programs designed to develop skills and knowledge. The use of audio and video technologies also brings content to life and stimulates the learning process (Reiners, Renner & Schreiber, 2005).

In addition, technology is a vital element in education and, if used appropriately, can contribute significantly to promoting successful language acquisition. An important aspect of being a successful language learner is the ability to pronounce words correctly, which can be a major challenge for some students. Role-playing has long been a method that teachers have embraced, as it encourages students to actively use the language (Otolu, 2012).

Moreover, most of the applications are internet-based and offer great features, as a result, the use of mobile internet has increased significantly. These applications are designed to help us in our daily lives, allowing us to connect to the internet, interact with the world, get information from far away places, as well as socialize through platforms such as Facebook, Twitter, GPS, etc. You can also control the air conditioner in your home through your mobile phone before you reach home, you can also receive alerts about your car or home through your mobile phone, and other features (Islam, et al., 2010).

According to (Mphahlele and Mashamaite, 2005) and as cited in (Aziz et al., 2013), SMS has been able to meet the needs of linguistic diversity and is increasingly being used in social communication, business transactions and advertising. Technology plays a pivotal role in modern communication, with SMS becoming popular, especially among the youth, due to the time and money it saves. However, learners tend to use it as a formal and standard language, leading to various errors, from incorrect spelling to ungrammatical sentence construction. This poses a major challenge to English language teachers in these contexts.

In addition, teleconferencing technologies, which connect communication partners in two or more locations, have created new opportunities for instant interaction without the need for physical presence. Audio conferencing technologies, on the other hand, have become more versatile than traditional telephones, allowing participants in multiple locations—including mobile participants whose location changes—to interact verbally. Live online chat, on the other hand, has provided a means for synchronous interaction in written form (Brau, 2006).

In addition, there are studies that explore the impact of technological and collaborative competencies on learning and teaching through web conferencing. These studies showed that technology training was of great importance to participants, but did not provide sufficient information about the types of competencies required (Chivers & Luca, 2010; Kreher, 2008; Reushle & Loch, 2008).

1- Mobile learning

Mobile learning technology is an effective tool to enhance out-of-class activities, as it directly links learning to real-life experiences. In addition, this technology allows learners to make better use of their free

time, helping even mobile students improve their learning skills. It also helps in using this technology in language learning. Students do not always have to study a second language in the classroom, but can learn it using their mobile devices anytime and anywhere. Since English language proficiency is a key component of professional success and an educational standard in many societies, providing an environment conducive to English language learning is one of the strategic educational goals that aims to improve student achievement and support the meeting of diverse learning needs. (Miyanga & Nazarat, 2012).

In addition, mobile technology has had a significant impact on education. First, mobile learning allows students to improve their literacy skills and discover their potential. Second, it can be used to enhance independent and collaborative learning experiences. Mobile learning helps students develop literacy and numeracy skills, as well as assess their current abilities. It also enhances individual and group learning experiences, enabling learners to identify their weaknesses and work on improving them. There is no doubt that the balanced use of mobile phones can increase learners' interest and bring about a positive change in the learning process, as well as contribute to enhancing their self-esteem and confidence (Mehta, 2012).

Furthermore, the mobile phone plays a fundamental role in English language teaching and learning, especially in the areas of vocabulary, oral skills, and listening, for several reasons. These include the physical characteristics of the mobile phone such as its size and weight, as well as input capabilities such as a keyboard or touch screen. They also include output capabilities such as screen size and audio functions, as well as the ability to store and retrieve files, processor speed, and error rates that may occur as a result of flaws in the design of the hardware, software, or interface (Al-Zaabi & Sabha, 2013).

In addition, the use of mobile technology in English language learning enhances learning opportunities, as students benefit from a tool that they are familiar with and carry with them at all times. The mobile phone is a self-referential technology, and after just a few hours, teachers can teach hundreds of words and phrases and improve their English speaking skills. Through this method, teachers have found it to be a fruitful investment of their time and adds value to their approach to language teaching (Salamat & Burgarb, 2013).

Similarly, mobile applications consist of programs or a set of programs that run on mobile devices and perform specific tasks for the user. Mobile applications are a modern and rapidly developing part of information and communication technology around the world. They are easy to use and low-cost, and can be downloaded and run on most mobile phones, including budget phones and entry-level phones. Mobile applications have a wide range of uses in multiple fields such as communication, messaging, browsing, chatting, social networking, audio, video, games and much more (IslamMet al., 2010).

2- Creative reading:

Reading is not limited to understanding and knowing the text being read, but rather includes understanding its meaning, reasoning, critical and creative logic, and these skills are linked to the reader's attempt to link what he reads to the previous news. Reads materials, produces ideas creatively, and evaluates them using his or her ability to imagine and think (Doll, 1991).

In light of the continuous increase in knowledge, and the challenges and real problems that reality produces, the importance of teaching creative reading and its skills, and employing it in processing information and solving problems, emerges. It is a modern necessity even in light of the era of life in which we live, the complexity of life and its rapid and successive changes, and the necessity of finding solutions to solve problems, meeting the needs of development, and creating a generation of innovators who make the reading material a source of thought, and add to it from their thinking and creativity diverse and unique ideas (Al-Salah and Al-Habib, 2004).

If creativity has multiple forms that require development, then developing creativity through language can be considered a basic goal that the school seeks to achieve. Learning language is no longer an automatic mental process, but rather a communicative process that learners can be trained to use, without being bound by fixed forms of linguistic expression, by giving them freedom of expression and focusing on the mental function of language, and developing their creative thinking (Qatami and Al-Lawzi, 2008)..

Martin (1982) believes that creative reading is an interactive process in which the reader engages with the text being read so that he becomes sensitive to the contradictions in the information and available

alternatives, and generates new relationships and combinations based on the information available to him in the text. Through his previous experiences and imagination, Habib Allah (1997) believes that creative reading is a skill that aims to lead the reader to creative thinking by placing the learner in front of a problem, asking him to read it and provide a solution for it, or answer questions related to it.

In light of the above, the researcher believes that creative reading is one of the highest levels of reading comprehension and insight, and is based on decoding the text being read, understanding it, and contemplating its vocabulary; to produce a large number of new knowledge, ideas, and alternatives derived from the text being read, in addition to the diversity of these alternatives and ideas, and their departure from the routine pattern of thinking.

The creative process in creative reading is the active field that directs the creativity of the reader, and the elements of creativity such as fluency and flexibility are evidence of the field of reading creativity in the learner (Qatami and Al-Lawzi, 2008).

3- Creative reading skills and their behavioral indicators:

Creative reading includes a set of skills and behavioral indicators that indicate each of these skills. The following are the skills of fluency and flexibility in creative reading and the indicators that indicate them, as follows (Abu Jabin, 2011):

1. Fluency: The ability to generate a large number of alternatives, synonyms, or ideas in response to a specific stimulus quickly and easily. In the field of reading texts, fluency refers to the learner's ability to read the text correctly, and to produce alternatives, suggestions, and ideas about the text being read. The following are behavioral indicators of fluency:
 - Reshaping, combining and formulating ideas in his own language.
 - Deriving the rhetorical and figurative meanings of vocabulary and linguistic structures.
 - Inferring the properties and characteristics of objects from the text read.
 - Identify the strengths and weaknesses of the text being read.
 - Providing new evidence and justifications in an unfamiliar way for existing ideas or opinions.
2. Flexibility skill: It includes the qualitative aspect of creativity, i.e. the diversity of ideas that the creator comes up with. Flexibility can be defined as the ability to change the state of one's mind as the situation changes. It is the ability to generate diverse ideas that are not of the type that the individual usually expects, and directs or changes the course of thought as the stimulus or requirement changes. The situation in the field of reading texts Flexibility refers to the student's ability to read the text, and the diversity of alternatives, suggestions and ideas that he presents through the text read. The most important behavioral indicators of the flexibility skill are the following:
 - Update emotional expressions that aim to convince the reader of an idea or change his mind, and confront them with scientific evidence and proof.
 - Make suggestions or ideas for developing the text being read.
 - Adding new and innovative details to an idea.
 - Suggest creative and innovative titles for reading topics.
 - Analyze the events or problem in the text you are reading.

In light of the above, it becomes clear to us that creative reading is one of the most important reading skills that teachers should pay attention to and develop in learners by reading lessons and literary texts. What helps develop these skills is choosing appropriate modern educational methods, and among those methods is the mobile phone, which develops these skills.

studiesPreviousAbout the role of mobile phone use

The study examined learners' usage patterns of smartphone vocabulary apps by Cho (2011), and examined the characteristics that influence Korean university students' satisfaction with mobile learning, as well as their influence on their continued use of this technology to study English. The current study aims to understand how Korean learners use smartphones for educational purposes, and what features of smartphone educational apps influence their satisfaction and willingness to continue using them for language learning.

The study included 32 university students, all of whom owned smartphones and had downloaded one of two different apps. After a week, they were asked to fill out questionnaires about their app usage patterns, their opinions about the features of the devices and the app, their satisfaction with mobile learning using the app, and their willingness to use smartphone apps for learning English in the future. The focus was on the app's features, functionality, ease of use, and portability.

The main findings of the study showed that: First, students used the app mainly on the go, but they did not use it extensively. Second, functionality was the most influential factor on students' satisfaction and continued use of the vocabulary learning app. Among the desired functions identified through in-depth analysis of the open-ended questionnaire were functions to classify memorized and non-memorized vocabulary, provide more examples, add audio to pronunciation, and self-control of vocabulary repetition. The study conducted by Furuya and Ota (2004) titled "Mobile Language Learning - A Pilot Project on Language Style and Personalization" was adopted. This study aimed to evaluate the effectiveness of mobile technologies, such as internet-connected smartphones, in language learning. Two experiments were conducted over a period of two years, where mobile language learning was used exclusively with university students for five months. A questionnaire containing 67 items was administered regarding factors such as learning style, motivation, lifestyle, and personality. The results of the questionnaire were statistically analyzed, and five main factors that contributed to improved test scores were identified. These five items are discussed in the context of learning style and personality, as well as the importance of personalization in developing curricula for mobile language learning.

Hegelheimer and O'Brien (2009) conducted a study to explore the impact of mobile technologies on language learning. This American study provides a comprehensive look at the use of podcasting in language learning, comparing three different methods: self-study, test preparation, and classroom integration. The program was evaluated with 14 undergraduate ESL students over a 15-week period. The results showed that most students preferred listening to podcasts on their computers rather than using an MP3 player. The authors concluded that podcasting has promising potential, but that more research is needed to determine its effects on second language acquisition.

Matia and colleagues (2012) conducted a study titled "Use of Mobile Phones in Teaching and Learning in Higher Education Institutions", where they explored how mobile phones are used in teaching and learning within higher education institutions in Tanzania. The study focused on assessing the role of mobile phones in facilitating teaching and learning, identifying applications used in this context, identifying the types of learning activities that can be enhanced through mobile phones, and assessing common challenges associated with mobile learning at Sokoine University. The study was based on a survey of faculty and students from colleges and institutes offering academic programmes, with 30 faculty members and 40 students randomly selected to participate. Data was collected through in-depth interviews, observations, and questionnaires. The results showed that most participants used their mobile phones in the context of teaching and learning, and many participants reported using traditional mobile learning applications such as text messaging and phone calls.

Farhan's study (2018) aimed to identify the level of creative thinking among secondary school students in Baghdad within the General Directorate of Education of Baghdad Governorate, Karkh III. To achieve the research objectives, the researcher used the creative thinking scale developed by Torrance, in addition to a special questionnaire designed for this purpose. The research sample consisted of (90) male and female students from the first three grades of secondary school. The results showed a good level of creative thinking among students, and there is a statistically significant relationship between creative thinking and academic achievement, with noticeable differences according to variables such as gender.

Al-Zahrani (2017) This study aims to know the impact of using modern technologies on academic achievement among middle school students. The researcher relied on the descriptive analytical approach, and used the questionnaire as a tool for collecting data. The study sample included 135 male and female

middle school teachers in the Kingdom of Saudi Arabia. The focus was also on the extent of the impact of these technologies on students' motivation and happiness during learning. The results indicate that using these technologies in explanation enhances students' interaction and increases their enthusiasm for learning. The study also highlighted the importance of integrating modern technologies into the educational process to enhance academic achievement and pay attention to technological developments in this field.

Al-Adini's study (2015) aims to identify the extent of the impact of using some smart devices in developing English speaking skills among third-year secondary school students by identifying speaking skills. Therefore, the researcher used the quasi-experimental approach based on the experimental and control groups. Pre- and post-measurement was conducted for both groups through an observation card, and it was applied to 54 students from Al-Quds Secondary School in Afif Governorate. Among the most prominent results is the positive impact of smart device applications in developing their English speaking skills, in addition to the existence of differences between the scores of students in the experimental group and the control group, which were in favor of the experimental group.

Comment on the study Previous

In short, all studies have emphasized the importance of teaching English through the use of mobile phones. However, this study differs from other studies in that it focuses on the impact of mobile phones on EFL learners, and it also identifies the communicative aspects of the language that students can acquire more efficiently and effectively than others.

Previous studies have shown that the use of mobile phones in teaching plays a vital role in the language learning process. This study is similar to other studies in the general aim of the impact of mobile phones on English language learning and teaching. However, this study seeks to explore the impact of mobile phone use on EFL learners' communicative competence.

The practical side

Study methodology

The experimental method was used because it is suitable for the study variables.

Study topics

The study sample consisted of (53) male and female students from the third intermediate grade in the school. Al-Abbasi Secondary School The study aimed to identify mathematics teachers in Iraq. They were chosen intentionally, and the study sample was divided into two groups: experimental and control. (24) students in the experimental group were taught using a cell phone, and (29) students in the control group were taught using the traditional method described in the teacher's guide.

Equivalence of study groups

The researcher applied the test to the individuals of the two study groups (control and experimental) to verify the equivalence of the two study groups on the pre-test as a whole; before starting to apply its procedures, where he used arithmetic averages, standard deviations, and the t-test for two independent groups, and Table (1) shows that.

Table (1)

Arithmetic means, standard deviations, and t-test for the performance of the individuals in the two study groups (control and experimental) on the pre-test as a whole.

ical significance	ε of freedom	e	ion rd	د count	ٲ	roup
						cism ficer

* There is a statistically significant difference at the level ($\alpha = 0.05$)

Looking at the results of the (t) test, it is clear that there is no statistically significant difference at the significance level ($\alpha = 0.05$) between the arithmetic means of the performance of the individuals of the two study groups (control and experimental) on the pre-test as a whole, which indicates the equivalence of the two study groups. For further statistical control, a one-way analysis of variance was conducted to determine the statistical significance of the individual differences between the arithmetic means of the performance of the individuals of the study group on the post-test.

Study tool

To achieve the objectives of the study, a creative reading test was prepared to measure the fluency and flexibility skills of third-year middle school students in Iraq in five lessons from the English reading book, as a pre- and post-test. This test was prepared according to the following steps:

- Identifying the basic skills of creative reading
- The test paragraphs were constructed according to the creative response controls, which aim to reveal the fluency and creative flexibility skills of the study individuals.
- The literature and theoretical studies related to creative thinking and its skills, and creative reading, were reviewed.
- Preparing test instructions, which are guidelines that guide and direct students during the test.
- A table was prepared to distribute the achievement test questions according to the skill and the behavioral indicators indicating it.

Creative Reading Test Validity

The Creative Reading Test was administered to a panel of judges who specialize in the language English and its teaching methods, where they were asked to put their suggestions and comments on the test.

Reliability of the Creative Reading Test

The reliability was calculated by applying the creative reading test to a survey sample consisting of (27) male and female students from Musa bin Nusayr Secondary School, using the test-re-test method with a time difference of two weeks between the two applications, where the Pearson correlation coefficient was calculated between the two application times; to be an estimate of the repetition reliability coefficient, and Table (3) shows the retest reliability coefficients for the two creative reading skills and for the test as a whole.

Table (3):

Retesting the reliability coefficients of the two creative reading skills tests and the test as a whole

Fluency	Flexibility	Creative reading test as a whole
0.79	0.84	0.85

Table (3) shows that the retest reliability coefficients for the fluency skill are (0.79), for the flexibility skill (0.84), and for the test as a whole (0.85), and all of these are acceptable values for the purposes of this study.

Consistency between proofreaders

To ensure consistency (between the correctors), the researcher chose one of the teachers with experience in teaching English to the third intermediate grade, to correct the creative reading test, where the consistency coefficient (between the correctors) was calculated using the following rule:

Agreed number of times

$$\text{Conformity stability coefficient} = \frac{\text{Agreed number of times}}{\text{Agreed number of times} + \text{Number of times of difference}}$$

Agreed number of times+Number of times of difference

Table (4) shows the consistency coefficient (between the correctors) for the two creative reading test skills and for the test as a whole.

Table (4)

Concordance reliability coefficients (between raters) for the two creative reading test skills and for the test as a whole

Fluency	Flexibility	Creative reading test as a whole
0.88	0.85	0.87

Table (4) shows the consistency coefficients (between the correctors), which reached (0.88) for the fluency skill, (0.85) for the flexibility skill, and (0.87) for the test as a whole, all of which are acceptable values for the purposes of this study.

Study procedures

The current study: Using mobile phones and measuring their impact on developing creative reading, preparing a creative reading test, measuring two skills: fluency and flexibility, and verifying the validity and reliability of the test before application.

- Two groups were randomly selected and divided into two groups: the experimental group, which studied using a mobile phone, and the control group, which studied using the traditional method.
- Verify the equivalence of the two groups by applying a pre-test, then conducting the appropriate statistical analyses to extract it.
- Statistical analysis of data, reaching study results, discussing them, and making recommendations in light of the study results.

Study design

The current study is a quasi-experimental study, through which the researcher attempts to control the study variables, to reveal the effect of the independent variable, which is the use of the mobile phone, and the usual method, on the dependent variable, which is creative reading skills (fluency and flexibility).

Study variables

Independent variable: teaching strategy, which has two categories:

- Mobile phone
- The usual way.

Dependent variable: Creative reading skills in English are:

- Fluency.
- Flexibility.

Statistical treatments:

To answer the study question in its two parts, the researcher used the following statistical treatments:

- Means, standard deviations, adjusted means and their standard errors.
- One Way ANCOVA.
- One-way multiple analysis of variance (MANCOVA).

First: Results of the question: The study states: "Are there statistically significant differences at the level of statistical significance ($\alpha = 0.05$) between the arithmetic averages of the study individuals' performance in each of the two creative reading skills and creative reading as a whole that can be attributed to the teaching method variable (using the mobile phone and the traditional method)?"

To answer this question, it is necessary to determine the significance of the differences between the arithmetic means of the study individuals' performance in the post-test on each of the two creative reading skills (fluency and flexibility) and on creative reading as a whole according to the variable of teaching method (mobile phone and traditional method). The following is an explanation of this:

a) Creative Reading Skills Test (Fluency and Flexibility)

A statistically significant correlation was confirmed between the two skills of the creative reading test (fluency and flexibility), by calculating the Pearson correlation coefficient between them, which reached a value of (.780), which is statistically significant at the level of statistical significance ($\alpha=0.05$), which justifies the use of the accompanying one-way multiple variance analysis (One Way MANCOVA), where the arithmetic means and standard deviations of the study individuals' performance on the paragraphs of each of the two skills were calculated., andThe study found that there were statistically significant differences between the average scores of the creative reading test (fluency and flexibility) before and after implementing the program, as well as the adjusted arithmetic averages and their standard errors according to the variable of teaching method (mobile phone and the usual method), and Table (5) shows this.

Table (5)

Arithmetic means and standard deviations of the performance of the study topics on the paragraphs My creative reading skills before and after, and the adjusted arithmetic means and their standard errors according to the teaching method variable

Learning method	Mean	Standard deviation	Mean	Standard deviation
Traditional	6.68	1.00	10.10	1.00
Mobile phone	10.10	1.00	6.68	1.00

It is clear from Table (5) that there are clear differences between the arithmetic means and for the purpose of changing the teaching method, these post-means for the experimental group members who were taught using the mobile phone were higher than the performance of the control group members who were taught using the traditional method. To isolate (delete) the differences in the performance of the study members in the pre-test on both creative reading test skills, and to identify the significance of the post-means according to the teaching method variable; One-way analysis of variance (MANCOVA) was used as shown in Table (6).

Table (6)

Results of a one-way multi-pair analysis of variance to the means accounting for performance of the study subjects in the post-test on each of my creative reading skills depending on the variable of teaching method

Learning method	Mean	Standard deviation	Mean	Standard deviation	Statistical significance
Traditional	6.68	1.00	10.10	1.00	0.000
Mobile phone	10.10	1.00	6.68	1.00	0.000

*The statement TStatistical significance at the statistical significance level ($\alpha = 0.05$)

Looking at the results of the variance analysis table (6), it becomes clear that What comes:

- There are statistically significant differences at the statistical significance level ($\alpha = 0.05$) between the study sample members of the average accountants for the study members' post-test performance on the creative reading skill test (fluency) attributed to the change in the teaching method in favor of the performance of the study members who were taught using the mobile phone, as the value ($F = 150.889$) was statistically significant (0.000) less than the statistical significance level ($\alpha = 0.05$).
- Referring to Table (6), it is clear that the adjusted arithmetic mean of the performance of the study individuals who were taught using the mobile phone was (10.10), which is higher than the adjusted arithmetic mean of the performance of the study individuals who were taught using the traditional method, which was (6.68). To identify the effectiveness of the educational medium variable in the creative reading test skill (fluency), the effect size was found. The effect size using Eta Square was found to be equal to

(75.5%): This means that (75.5%) of the variance in the arithmetic mean of the study individuals' performance on the creative reading test skill (fluency) is due to the teaching method variable.

- There are statistically significant differences at the level of statistical significance ($\alpha = 0.05$) between the average scores of the study individuals, the average accountants, on the test of creative reading skill (flexibility) in the post-test, attributed to the change in the teaching method in favor of the performance of the study individuals who were taught using the mobile phone, as the value ($F = 46.948$) was statistically significant (0.000) less than the level of statistical significance ($\alpha = 0.05$).
- Referring to Table (5), it is clear that the adjusted arithmetic mean of the performance of the study individuals who were taught using the cooperative learning strategy was (8.14), which is higher than the adjusted arithmetic mean of the performance of the study individuals who were taught using the traditional method, which was (6.09). To identify the effectiveness of the teaching method variable in the creative reading test skill (and flexibility), the effect size was found. The effect size using Eta Square was found to be equal to (48.9%): This means that (48.9%) of the variance in the arithmetic mean of the study individuals' performance on the creative reading test skill (flexibility) is due to the teaching method variable.

a) Creative reading test as a whole

The arithmetic means and standard deviations of the study individuals' performance on the pre- and post-test paragraphs of creative reading as a whole were calculated, and the adjusted arithmetic means and their standard error were calculated, according to the variable of teaching method (mobile phone, and the usual method), and Table (7) shows that.

Table (7)

Arithmetic means and standard deviations of performance Study topics About paragraphs Creative reading test before and after the test as a whole, calculate the adjusted arithmetic means and their standard error. Depending on the variable of teaching method

Mean		Standard deviation		Standard error		Teaching method
Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test	
						Usual way
						Mobile phone
						Traditional

It is clear from Table (7) that there are clear differences between the arithmetic means of the study individuals for the creative reading test as a whole, according to the change in the teaching method. The post-arithmetic means of the performance of the study individuals who were taught using mobile phones were higher than the performance of those who were taught using the traditional method; to isolate (delete) the differences in the performance of the study individuals on the pre-creative reading test as a whole, and to know the significance of the post-differences according to the teaching method variable; a one-way analysis of variance (MANCOVA) was used as shown in Table (8).

Table (8)

Results of one-way analysis of variance accompanying the accounting means of the performance of the study of creative reading topics after the test as a whole, and according to the teaching method variable

Source	Sum of Squares	df	Mean Square	F	Significance	Partial eta squared
Between groups	9.35	2	4.675	9.8	.000	.489
Within groups	52.00	18	2.889			
Total	61.35	20				

*Statistically significant data at the statistical significance level ($\alpha = 0.05$)

It is clear from Table (8) that there is a statistically significant difference when Level: There are statistically significant differences ($\alpha = 0.05$) between the average scores of the study sample members on the creative reading test as a whole, attributed to the change in the teaching method in favor of the

performance of the study sample members who were taught using mobile phones, as the value ($F = 124.710$) was statistically significant (0.000) less than the level of statistical significance ($\alpha = 0.05$).

It is clear from Table (7) that the adjusted arithmetic mean of the performance of the study individuals who were taught using the mobile phone was (18.16), which is higher than the adjusted arithmetic mean of the performance of the study individuals who were taught using the traditional method, which was (12.83). To identify the effectiveness of the teaching method variable in the creative reading test as a whole, the effect size was found. The effect size using Eta Square was found to be equal to (71.4%): This means that (71.4%) of the variance in the arithmetic mean of the performance of the study individuals on the creative reading test as a whole is due to the teaching method variable.

It is clear from the above that there is a role for using mobile phones in developing creative reading skills among third-year middle school students in the English language subject, and this is what these applications provide in terms of providing the student with the opportunity to think creatively and reach solutions that no one has thought of before, thus opening the way for him to be creative in it, and this helped develop the fluency skill among students. The researcher also attributes the method of using mobile phones in developing the flexibility skill among students to the benefit it provides to the skill that branches into written or spoken communication skills, in addition to its role in good listening, as its first degree was important in the way it conveyed students' ideas, while its second idea was essential for understanding and analyzing problems.

Study recommendations and suggestions

1. The importance of using smartphone applications lies in the fact that they are one of the main sources that enhance and develop creative thinking skills in the educational environment in which the education department operates. Interest in these applications is increasing by reviewing the experiences of advanced countries and benefiting from them in the best possible ways.
2. Preparing training programs aimed at increasing the awareness of class students Third Intermediate The importance of using smartphone applications and their role in developing creative thinking skills.
3. Providing all modern technological capabilities to support the development of creative thinking skills among grade students. Third Intermediate In particular and students in general.
4. . Adopting awareness programs that highlight the importance of using smartphone applications in the educational process and their impact on developing creative thinking skills.
5. Conduct similar studies on the impact of smart applications and their educational uses, and their benefits for students in other grades, with comparisons made with different environments and regions, so that they include diverse samples of both genders.

bibliography

Al-Hilla, Muhammad Mahmoud ((2016), Educational Games and Their Productive Applications Psychologically, Educationally and Practically, Second Edition, Amman, Jordan, Dar Al-Masirah for Publishing and Distribution.

Al-Qazzaz, Muhammad Saeed, (2012) Parental Education in Early Childhood, Second Edition, Cairo - Egypt, Dar Farha for Publishing and Distribution

Bracelet: 1987 Early Childhood Education - London. Hodder and Stoughton.

Carol. Early Childhood Education in the 1990s, New York.

Coral, 1993, p. 8-A - Early Childhood. Carolum, Macmillan Publishers. New York.

Dansky J (1980) Negative consequences of sociodramatic play and exploration training on economically disadvantaged preschool children. Journal of Child Psychology.

Dodek, C. Creativity in Young Children—Attitude or Ability. Journal of Creativity, 1974.

Gorey A (1975) Training and rehabilitation of disadvantaged black children in kindergarten under the influence of social drama. A method of recalling rare events and relieving stress. Georgia International University Microfilm.

Guilford, J.P. (1979) Traits of Creativity. In: P.E. Vernon. Creativity, Volume IV, London, Penguin Books, p.

- Huizing (1988) Identicals: The Element of the Playground. In Kaieteur-Puchon Verlag.
- Jaber, Jaber Abdul Hamid, (2013) Cognitive Development, First Edition, Amman, Jordan: Dar Al Fikr for Printing and Publishing.
- Karam El-Din, Laila, (2011) The Culture of Play and Children, Early Childhood and Kindergarten Magazine, Arab Council for Childhood and Development, Issue 12.
- Kretsch L (1983) The effect of play-based instruction on young children's cognitive performance. Journal of Educational Research.
- Maslow, H. (1987) Motivation and Personality, New York, Harper & Row, LNC.
- Mustafa, Abdul Aziz, (2011) The effect of practicing directed motor activities on motor development in preschool children, Umm Al-Qura University, Issue (21), Volume 12.
- Qanawi, Hoda, Mohamed (2015). The Child and the Kindergarten, Cairo: Anglo-Egyptian Press.
- Reinecke Lewis (1975) The effectiveness of a creative free play program for kindergarten children in controlling abdominal muscles.
- Reinecke, S. (1975) Creature activity. Free play program. Kindergarten children. Summary. International.
- Rogers, S. (1973) Towards a Theory of Creativity, in: P. E. Vernon, (ed.) Creativity, Harmondsworth, Penguin Books.
- Sadek, Yasriya, (2013). Early Childhood Psychology and the Nursery and Kindergarten Child, Part Two, Cairo: Qubaa House for Printing and Publishing.
- Satz, E. & Johnson, J. (1975): Creative play training for culturally deprived children, Journal of Educational Psychology.
- Sharif, Nadia Mahmoud, (2011) Play as a dominant activity in a child's life, Early Childhood and Kindergarten Magazine issued by the Arab Council for Childhood and Development, Issue (12).
- Tannenbaum, J. Abnam (1984) The Impressed Child. Educational Psychological Perspectives, Macmillan Publishing, New York.
- Torrance, E. B.: Instruction in Creative Thinking in the Early School Years in Tuilar, C. W. and Barron, E. Kidd) Scientific Creativity, Its Recognition and Development, New York 1915.
- Torrance, E. B. (1964) Education and Creativity in Taylor, C. W., Creativity: Progress and Potential, New York.
- Virginia, 1989 Department of State: Definition and Description of Non-Educational Kindergarten, Virginia Department of Education Richard October.