Effectiveness of Employing the Imaginative Learning Strategy in Scientific Courses in Emirati Private Schools

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Abstract

This study explored the effectiveness of employing the imaginative learning strategy in scientific courses in Emirati private schools from the perspective of the teachers teaching scientific courses. The descriptive analytical approach was adopted to investigate such effectiveness, and in-depth interviews were carried out. Online in-depth interviews were conducted with thirty teachers (19 male teachers and 11 female teachers). Those teachers were chosen purposively. They teach science courses. They were chosen from six private schools in Sharjah, five private schools in Dubai, and three private schools in Dubai. The interviews were recorded and analysed to reach reliable results. Such analysis aims to identify the degree to which the targeted teaches employ this strategy. It aims to identify the impact of employing this strategy in scientific courses on the quality of education. It aims to identify the impacts of employing this strategy in scientific courses. It aims to identify the barriers and challenges that might be faced when employing this strategy by the targeted teachers. Several results were reached. For instance, respondents have positive attitudes towards employing this strategy in scientific courses. In addition, employing this strategy in scientific courses in Emirati private schools effectively improves the quality of education. The researchers recommend holding courses for teachers in UAE about the use of the imaginative learning strategy in scientific courses.

Keywords: effectiveness, the imaginative learning strategy, scientific courses, Emirati private schools, UAE, learning strategy, challenges

1. Introduction

During the last couple of decades, technological devices and software have been increasing in a rapid manner (Alderbashi, 2021). In addition, various developments have been made in education and technology (Al-Derbashi & Moussa, 2022). Such developments include developing social media (Alderbashi & Khadragy, 2018; Salloum et al., 2023; Aburayya et al., 2023). They led to the emergence of a variety of teaching and learning modes. Such modes include the flipped learning mode (Al-Derbashi, 2017; Alderbashi, 2022) and the blended learning mode (Al-Derbashi and Abed, 2017).

The developments that occurred in the fields of education and technology led to the emergence of a variety of teaching and learning strategies. Such strategies include the imaginative learning strategy. The imaginative learning strategy refers to a set of procedures and steps through which the instructor asks the students to think about a specific pre-made scenario. Those procedures aim to allow the students to create visual images and videos in their minds for things, situations, and events and visualize them (Mohammad, 2018).

There are other definitions for the imaginative learning strategy. For instance, this strategy may be defined as the process of remembering and visualizing certain events or things or imagining doing certain experiments or actions. It aims to meet specific academic goals (Nashaweih, and Rayyan, 2021). Employing this strategy increases the degree to which the information is retained in the student's memory. That is because this strategy allows the student to think about things, processes and information in terms of sensory characteristics (Al-Janabi, 2016).

Employing this strategy positively affects the academic achievement levels of students. That's because this strategy allows students to visualize knowledge and implement it in real-life situations (Al-Janabi, 2016). Furthermore,

employing this strategy enhances the decision making skills of students. That's because this strategy allows students to visualize several probabilities or solutions and decide which probability or solution should be chosen. In addition, employing this strategy promotes a sense of responsibility among students. That is because the teacher may shed light on problems that the local society faces through using this strategy. That shall engage students in the process of finding solutions for such problems. In this way, a sense of belonging and a sense of responsibility shall be promoted among students (Kareem, 2018).

There are other advantages for employing this strategy. For instance, employing it improves students' understanding for events (including historical events). That's because this strategy allows students to visualize wars, pandemics, military attacks, and conflicts (Al-Jazi, 2020). Employing this strategy positively affects the students' critical thinking skills. That's because this strategy allows students to analyse and think about how conflicts, events, and processes occurred based on the information given to them by the teacher. Such processes may include: the way of making honey by the bee (Al-Harithi, 2017).

Employing the imaginative learning strategy improves the speaking and writing skills of students. That is because this strategy allows students to express the ideas they imagined in a verbal or written manner (Mahasneh, 2020). Employing this strategy improves students' reading skills, because the instructor may ask the students to employ this strategy with dong writing-based tasks. In addition, it enhances the reflective thinking skills of students (Abed Al-Wahab, 2016). It raises the degree to which the student retains knowledge and information (Al-Janabi, 2016). To add more, it enhances the students' logical thinking skills (Al-Kilani and Al-Shamam, 2020).

Employing the imaginative learning strategy promotes creativity among students because it allows the students' to visualize numerous possible scenarios (Al-Refa'y, 2019). Furthermore, it improves the future thinking skills of students, because it allows them to think about the future consequences of problems, such as: environmental problems. For instance, the instructor may ask the students to think about the future consequences of air pollution or global warming (Al-Sayed, 2019).

Employing this strategy positively affects the literary appreciation skills of students because students can visualize the ideas in a certain poem. That shall make students realize how beautiful the poem is (Ahmad, 2020). It improves the students' problem-solving skills, because the instructor may ask the students to think about the causes and solutions of social or scientific problems (Mukhtar, 2010). This strategy can be employed to promote morals and ethics among students. For instance, the instructor may ask the students to visualize the consequences of having a society that refrains from complying with morals and ethics. In this way, students shall be encouraged to comply with morals and ethics (Mohammad, 2018).

There are many merits for employing the imaginative learning strategy in courses, including scientific courses. However, the number of studies that shed a light on the effectiveness of employing the imaginative learning strategy in scientific courses are scarce. Therefore, the researchers investigated the effectiveness of employing the imaginative learning strategy in scientific courses in Emirati private schools from the perspective of the teachers teaching scientific courses

1.1 Objectives

Through this article, the researchers aimed to

a) Identify the degree to which the teachers of scientific courses in Emirati private schools employ the imaginative learning strategy

b) Identify the impact of employing the imaginative learning strategy in scientific courses in Emirati private schools on the quality of education

c) Identify the impacts of employing the imaginative learning strategy in scientific courses in Emirati private schools.

d) Identify the barriers and challenges that might be faced when employing the imaginative learning strategy by the teachers of scientific courses in Emirati private schools

e) Offer suggestions for raising the effectiveness of the process of employing the imaginative learning strategy in scientific courses in Emirati private schools

1.2 Questions

The researchers aimed to answer those questions

Q.1) To what degree do the teachers of scientific courses in Emirati private schools employ the imaginative learning strategy?

Q.2) What is the impact of employing the imaginative learning strategy in scientific courses in Emirati private schools on the quality of education?

Q.3) What are the impacts of employing the imaginative learning strategy in scientific courses in Emirati private schools?

Q.4) What barriers and challenges might be faced when employing the imaginative learning strategy by the teachers of scientific courses in Emirati private schools?

Q.5) What are the suggestions that can be proposed for raising the effectiveness of the process of employing the imaginative learning strategy in scientific courses in Emirati private schools?

1.3 Significance of the Study

This study is deemed significant in theoretical and practical aspects. Further details about the study's significance are mentioned below:

- Through the theoretical framework of this article, the researchers provide teachers with knowledge about the use of the imaginative learning strategy in scientific courses.

- This article is the first one that investigated the effectiveness of employing the imaginative learning strategy in scientific courses in Emirati private schools from the perspective of the teachers teaching scientific courses.

- This study offers a new instrument that can be used in other articles for investigating the effectiveness of using the imaginative learning strategy in scientific courses in universities or other types of schools. This instrument was designed by the researchers based on secondary data sources.

- This study provides leaders and administrators in schools with beneficial results about the use of the imaginative learning strategy in scientific courses.

- This study provides the trainers of teachers with knowledge about the significance of using the imaginative learning strategy in scientific courses.

- This study offers suggestions that can be proposed for raising the effectiveness of the process of employing the imaginative learning strategy in scientific courses.

1.4 Limitations and Limits

- Temporal limits: This study was carried out during the second semester of the academic year 2021/2022.

- Spatial limits: This study targets Emirati private schools

- Human limits: The researchers chose a sample of 30 teachers teaching science courses in the schools mentioned above.

- Limitations: The researchers can't generalize the results reached through this article. That is because those results are affected by several factors. Such factors include: the size and characteristics of the members of the sample

1.5 Definitions (Theoretical and Operational Ones)

-The imaginative learning strategy (theoretical definition): It refers to a set of procedures and steps through which the instructor asks the students to think about a specific pre-made scenario. Those procedures aim to allow the students to create visual images and videos in their minds for things, situations and events and visualize them (Mohammad, 2018). This strategy may be defined as the process of remembering and visualizing certain events or things or imagining doing certain experiments or actions. It aims to meet specific academic goals (Nashaweih, and Rayyan, 2021). It may be defined as a strategy that makes one think about things, processes and information in terms of sensory characteristics (Al-Janabi, 2016).

-The imaginative learning strategy (operational definition): It refers to a set of procedures and steps through which the teachers of scientific courses at Emirati private schools ask the students to think about a specific pre-made scenario. That's done in order to allow students to create visual images and videos in their minds for things, situations and events that are related to the material.

-Scientific courses (operational definition): They include the science courses that are taught in private schools in UAE (i.e. the math, biology, chemistry, and physics courses)

1.6 Theoretical Framework

Employing the imaginative learning strategy can be used for instilling morals and ethics within students through asking students to visualize how people would behave without ethics and morals. Thus, this strategy can be employed

in philosophy courses. For instance, the teachers of philosophy course could ask students to visualize the consequences of not having conscience (Mohammad, 2018). Furthermore, employing this strategy improves the problem-solving skills of students. That's because the teacher could present a specific social or scientific problem and ask students to visualize several possible solutions for it (Mukhtar, 2010). Amiry and Al-Kurji (2019) add that this strategy improves students' visual intelligence.

Employing this strategy fosters the development of students' speaking and writing skills. That's because the teacher can ask the students to express the ideas they have imagined in a written or verbal manner. That offers the students opportunities to use the language in a verbal or written manner (Mahasneh, 2020). In addition, employing this strategy enhances the students' logical thinking skills in the field of mathematics. That's because the students may visualize mathematical processes and problems in real life situations. That shall facilitate the process of solving mathematical problems and equations (Al-Kilani and Al-Shamam, 2020).

Employing the imaginative learning strategy improves the students' ability to connect images and pieces of information with each other. It enables them to imagine several probabilities for how certain processes and events occurred. That contributes to unleashing the students' cognitive and creative potentials. In addition, employing this strategy allows students to save and retain information in an easier and faster manner because it allows visualizing the visual characteristics of the targeted information. It's also because one's ability to retain the information acquired visually is better than his/her ability to retain the information acquired through audio means only (Nashaweih, and Rayyan, 2021)

Employing the imaginative learning strategy allows students to engage in the learning process to a great extent. It raises students' level of creativity. Furthermore, it allows students to retain the information related to the details of the tangible things. It provides students with opportunities to express themselves and their ideas. In addition, it allows students to think deeply, observe things well, and reach results. It allows students to acquire new knowledge. It allows students to merge mental images together through using their minds (Nashaweih & Rayyan, 2021)

Nashaweih and Rayyan (2021) add that this strategy improves students' cognitive skills and abilities because it allows them to think about things, and analyse and visualize them. It's because this strategy allows students to make plans and decisions. In addition, employing this strategy allows students to restructure and analyse mental images. It allows students to detect the relationships between the pieces of knowledge and between the mental images through visualizing such relationships in their minds. In addition, it contributes to developing the students' observation skills because it allows students to visualize the visual details of things. It also allows students to save the recently acquired information by forming new mental images (Nashaweih & Rayyan, 2021).

1.7 Empirical Studies

The researchers reviewed several empirical studies to collect the relevant data. They are presented below. They are also arranged based on their year of publication:

Al-Janabi (2016) explored the effect of employing the imaginative learning and active learning strategies on the achievement and retention of students in biology. The experimental approach was adopted. Seventy-five (75) students were sampled. They were divided equally into control group and experimental one. Pre-test and post-test were used. It was found that employing the imaginative learning and active learning strategies positively affect the achievement and retention of students in biology

Al-Harithi (2017) explored the effect of employing the imaginative learning strategy in social and national education on the development of sixth (6th) grade students' critical thinking skills in Saudi Arabia. The semi-experimental approach was adopted. Fifty (50) sixth (6th) grade students were sampled. They were divided equally into a control group and an experimental one. Pre-test and post-test were used. It was found that employing the imaginative learning strategy in social and national education positively affects the development of 6th-grade students' critical thinking skills in Saudi Arabia.

Abed Al-Wahab (2016) explored the effectiveness of employing the imaginative learning strategy in improving the reading and writing skills among primary school students suffering from Arabic language-related difficulties. The semi-experimental approach was adopted. The latter researcher explored this strategy's effectiveness in improving those students' reflective thinking skills. He sampled thirty three sixth (6th) grade students suffering from Arabic language-related difficulties. He used several instruments. Those instruments are: writing skills test, reading skills test, and reflective thinking test. It was found that employing this strategy positively affects the reflective thinking skills of those students. It was found that employing this strategy positively affects the writing and reading skills of those students.

Khalaf Allah (2018) explored the effectiveness of a proposed strategy that's based on imaginative learning in developing the spelling skills of third intermediate-grade students in Saudi Arabia. He sampled sixty (60) third intermediate grade students in Saudi Arabia. He divided them into control and experimental groups. He used the random sampling method and the semi-experimental approach. He used a pre-test and post-test. He found that this proposed strategy positively impacts developing the spelling skills of the third intermediate-grade students in Saudi Arabia.

Amiry and Al-Kurji (2019) explored the impact of the imaginative learning strategy on the visual intelligence of students. 44-second grade students were sampled. They explored the impact of this strategy on achievement in Chemistry courses. Pre-test and post-test were used. SPSS software was used. It was found that this strategy positively affects students' achievement in a chemistry course. It was found that this strategy positively affects the visual intelligence level of students.

Hashem (2019) explored the effect of employing the imaginative learning strategy in the history course on the achievement of the preparatory female school students in Iraq. The semi-experimental approach was adopted. The control group consists from twenty (20) students and the experimental group consists from twenty (20) students. Those students were chosen randomly. Pre-test and post-test were used. It was found that employing the imaginative learning strategy in the history course positively affects the achievement of the preparatory female school students in Iraq.

Al-Sayed (2019) explored the impact of employing the imaginative learning strategy on the future thinking skills of elementary school students in Egypt. She used the semi-experimental approach. She sampled thirty (30) fourth grade students. She used a pre-test and post-test. She found that this strategy positively affects the future thinking skills of students in primary schools.

Al-Refa'y (2019) explored the effect of employing the imaginative learning strategy on Creativity among primary school students in the Kingdom of Saudi Arabia. The semi-experimental approach was adopted. The latter researcher sampled thirty (30) sixth grade students. She used a pre-test test and post-test for assessing students' creativity. Data were analysed through using statistical means. Employing the imaginative learning strategy positively affects students' creativity in primary schools in Saudi Arabia. The researcher recommends providing students with opportunities to express ideas from their imagination.

Al-Mahdawi, and Maqableh (2020) explored the impact of employing the imaginative learning strategy on the easy writing skills of female tenth (10th) grade students in Irbid, Jordan. The semi-experimental approach was adopted. The sample consists of thirty six (36) female tenth grade students who were chosen purposively from Irbid. Those students were divided into control and experimental groups. Pre-test and post-test were used. It was found that employing the imaginative learning strategy positively affects the easy writing skills of female tenth (10th) grade students in Irbid, Jordan.

Al-Jazi (2020) explored the effect of employing the imaginative learning strategy in history course on understanding historical events among the 4th grade students in the schools in Southern Badia in Jordan. The semi-experimental approach was adopted. Seventy-three (73) sixth-grade students were sampled in a purposive manner. They were divided equally into control group and an experimental one. Pre-test and post-test were used. It was found that employing the imaginative learning strategy positively affects the understanding of historical events among the 4th-grade students in the schools located in Southern Badia.

Ahmad (2020) explored the effect of employing the imaginative learning strategy in Arabic language courses on the literary appreciation skills of 6th-grade students. She used the semi-experimental approach. She sampled forty (40) sixth grade students. She used a pre-test and post-test. It was found that employing the imaginative learning strategy in Arabic language courses has a positive impact on the literary appreciation skills of 6th-grade students.

2. Methodology

2.1 Approach

The researchers adopted a qualitative approach for analysing the answers of the interviewees to open-ended questions. They also adopted a quantitative approach for analysing the yes/no questions in the interviews through calculating percentages and frequencies. They adopted a descriptive analytical approach.

Doyle et al. (2020) add that the descriptive analytical approach is usually employed in studies and research articles for obtaining data and analysing it in a statistical manner. The latter approach allows authors and researchers to investigate the philosophical framework that's underlying a certain phenomenon. It is adopted to explore a certain phenomenon's

merits, effects and consequences (Doyle et al., 2020). According to Östlund et al. (2011), the quantitative approach is adopted in studies in the fields of healthcare social sciences, and etc... It allows researchers and scholars to identify the links existing between a specific theory and empirical findings. It allows researchers and scholars to develop a new theory and check the validity of specific theoretical assumptions (Östlund et al., 2011).

2.2 Population and Sample

The population involves all the teachers teaching scientific courses in Emirati private schools. The researchers selected the study's sample. The sample consists from 30 teachers (19 male teachers and 11 female teachers). Those teachers were chosen in a purposive manner. They teach scientific courses in private schools in UAE. They were chosen from six (6) private schools in Sharjah, five (5) private schools in Dubai, and three (3) private schools in Dubai. Data were obtained from those teachers through conducting in-depth online interviews via the Skype program. The interviews were recorded and analysed to reach reliable results and offer effective recommendations.

Table 1. Data about the Sample

Variable	Category	Frequency	Percentage
Gender	Male	19	63.33
	Female	11	36.66
Emirate	Sharjah	14	46.66667
	Dubai	12	40
	Abu Dubai	4	13.33333
The course taught by the teacher	Math course	11	36.66667
	Biology course	6	20
	Physics course	5	16.66667
	Chemistry course	8	26.66667

N=30 teachers

2.3 Instrument

The researchers decided to interview the sampled teachers. The sampled teachers signed written consents. Then, the researchers drafted the interview questions based on the relevant literature. After that, they conducted online in-depth interviews with the sampled teachers of scientific courses. The interviews were held through using the Skype program. They were recorded and analysed after that.

2.4 Validity of the Instrument

The researchers passed the initial version of the interview questions to three instructors working at a university in UAE. The instructors hold Ph.D. degree in teaching methods. They were asked to assess the interview questions in terms of relevancy, language, ability to meet the intended goals, and clarity. They were asked to make the required corrections and modifications to the instrument. They were asked to suggest recommendations.

All the instructors added that the interview questions were clear and relevant to the study's goals. They added that the interview questions are written well and free from errors related to spelling, structure, or grammar. However, one of the instructors recommended adding a question about the thinking skills. Another instructor recommended adding a question about the language skills. Thus, questions were add about the thinking, and language skills. Then, the final version of the interview questions were drafted.

2.5 Data Collection Methods and Data Analysis

The following sources of data were used:

-Primary data source: It's represented in the interviews held with the teachers of scientific courses.

-Secondary data sources: They include: PhD dissertation, books, research articles, and MA theses.

The researchers listened several times to each interview to analyse its content and reach valid and reliable results. They used descriptive analytical and qualitative means for analysing the obtained data to reach reliable results and identify the sampled teachers' characteristics (i.e. gender, the courses they teach, and the Emirate they teach at). Those descriptive analytical means are: frequencies and percentages. The statistical data are presented through tables in this article.

3. Results and Discussion

3.1 Results and Discussion Related to the Study's First Question

Q.1) To what degree do the teachers of scientific courses in Emirati private schools employ the imaginative learning strategy?

After analysing the answers of the sampled teachers, the researchers found that 18 teachers (83.33%) often employ this strategy and 5 teachers always employ this strategy (16.66%). Those percentages indicate that the teachers of scientific courses in Emirati private schools have much knowledge about learning strategies and the significance of using them in class. Table (2) presents data about the answers provided for this question.

Table 2. Data about the Answer of the Study's First Question

Variable	Rating	Frequency	Percentage (%)
To what degree do you employ the imaginative learning strategy in the course you teach?	Always	5	16.66667
	Often	18	60
	Sometimes	3	10
	Rarely	4	13.33333
	Never	0	0

3.2 Results and Discussion Related to the Study's Second Question

Q.2) What is the impact of employing the imaginative learning strategy in scientific courses in Emirati private schools on the quality of education?

Table 3. Data about the Answer of the Study's Second Question

Variable	Rating	Frequency	Percentage (%)
What is the effectiveness of employing the imaginative learning strategy in the course you teach in improving the quality of education?	Highly effective	24	80
	Moderate effectiveness	4	13.33333
	Low level of effectiveness	2	6.666667
	Not effective at all	0	0

80% of the sampled teachers believe that employing the imaginative learning strategy in scientific courses is highly effective in improving the quality of education. 13.33% of the sampled teachers believe that employing this strategy is effective to a moderate degree in improving the quality of education. That indicates that most of the respondents believe that this strategy can raise the quality of the education provided to students. This result indicates that the targeted teachers realize the significance and benefits of employing this strategy in scientific courses.

3.3 Results and Discussion Related to the Study's Third Question

Q.3) What are the impacts of employing the imaginative learning strategy in scientific courses in Emirati private schools?

93.3% of the sampled teachers believe that employing the imaginative learning strategy in scientific courses improves the learning outcomes of the teaching-learning process. This result is attributed to the fact that using a strategy in the teaching-learning process contributes to making it more systematic and organized rather than being a random process.

93.3% of the sampled teachers believe that employing this strategy in scientific courses improves the students' academic achievement. This result is in agreement with the one concluded by Al-Janabi (2016). It's attributed to the fact that imagining the way in which scientific operations occur shall lead to having a better understanding of such operations. That shall positively affect the achievement of students in tests in scientific courses.

Ninety (90%) of the sampled teachers believe that employing the imaginative learning strategy in scientific courses improves the students' thinking skills. This result is in agreement with the one concluded by Al-Harithi (2017). Al-Harithi (2017) found that this strategy positively affects critical thinking skills. The latter result is attributed to the fact that this strategy allows students to employ their thinking skills through thinking about potential problems, and operations. It can be attributed to the fact that this strategy makes students carry out brainstorming activities which develop their thinking skills.

Table 4. Data about the Answer of the Study's Third Question

Question	Answer	Frequency	Percentage (%)
Does employing the imaginative learning strategy in the course you teach improve the learning outcomes?	Yes	28	93.33333
	No	2	6.666667
Does employing the imaginative learning strategy in the course you teach improve the students' achievement?	Yes	28	93.33333
	No	2	6.666667
Does employing the imaginative learning strategy in the course you teach improve the students' thinking skills?	Yes	27	90
	No	3	10
Does employing the imaginative learning strategy in the course you teach improve the students' language skills?	Yes	23	76.66667
	No	7	23.33333
Does employing the imaginative learning strategy in the course you teach improve the students' decision making skills?	Yes	19	63.33333
	No	11	36.66667
Does employing the imaginative learning strategy in the course you teach raise the students' motivation to learn?	Yes	25	83.33333
	No	5	16.66667
Does employing the imaginative learning strategy in the course you teach improve the students' understanding for the material?	Yes	24	80
	No	6	20
Does employing the imaginative learning strategy in the course you teach make learning enjoyable?	Yes	30	100
	No	0	0
Does employing the imaginative learning strategy in the course you teach promote a sense of creativity and innovation within students?	Yes	29	96.66667
	No	1	3.333333

76.66% of the sampled teachers believe that employing the imaginative learning strategy in scientific courses improves the students' language skills. This result is in agreement with the one concluded by Mahasneh (2020) and Abed Al-Wahab (2016). Mahasneh (2020) found that this strategy positively affects students' speaking and writing skills. Abed Al-Wahab (2016) found that this strategy positively affects the students' reading skills. The latter result is attributed to the fact that using this strategy provides students with a chance to practice their speaking skills through expressing their ideas and opinions verbally. It can be attributed to the fact that using this strategy provides students with opportunities to practice their writing skills through doing writing-based tasks to express the ideas they imagined. It can be attributed to the fact that using this strategy requires sharing ideas verbally or in writing and listening to peers and teachers. In addition, the teacher may pass a specific written text to students to be read before employing this strategy. That shall contribute to developing the reading skills of students.

63.33% of the sampled teachers believe that employing the imaginative learning strategy in scientific courses improves the students' decision making skills. This result is in agreement with the one concluded by Kareem (2019). It may be attributed to the fact that students may have to make decisions on behalf of their group when employing this strategy in groups.

83.33% of the sampled teachers believe that employing the imaginative learning strategy in scientific courses raises the students' motivation to learn. The latter result may be attributed to the fact that students love learning through visualizing things and actions and using strategies. 80.0% of the sampled teachers believe that employing the imaginative learning strategy in scientific courses improves the students' understanding for the material. This result is in agreement with the one concluded by Al-Harithi (2017). It may be attributed to the fact that visualizing things allows students to think about the visual characteristics of those things

100% of the sampled teachers believe that employing the imaginative learning strategy in scientific courses makes learning enjoyable. The latter result is attributed to the fact that providing students with the opportunity to imagine things and think about many possibilities makes learning more enjoyable. 96.66% of the sampled teachers believe that employing this strategy in scientific courses promotes creativity and innovation among students. This result is in agreement with the one concluded by Al-Refa'y (2019). It may be attributed to the fact that this strategy allows students to think in a creative manner to find creative solutions and think about the possibilities.

3.4 Results and Discussion Related to the Study's Fourth Question

Q.4) What are the barriers and challenges that might be faced when employing the imaginative learning strategy by the teachers of scientific courses in Emirati private schools?

Table 5. Data about the Answer of the Study's Fourth Question

Question	Answer	Frequency	Percentage (%)
Do you face barriers and challenges when employing the imaginative learning strategy in the course you teach? If so, what are those barriers and challenges?	Yes	18	60
	No	12	40

After analysing the interviewees' answers, the barriers and challenges that might be faced by the teachers of scientific courses in Emirati private schools when employing the imaginative learning strategy are mentioned below:

1） Employing this strategy is time consuming

Eight teachers added that employing this strategy in scientific courses is time-consuming. In addition, one of those teachers added that using this strategy may hinder teachers from covering the whole material.

2) Employing this strategy requires having teachers who possess excellent time management skills

Two teachers added that employing this strategy in scientific courses requires having teachers who possess excellent time management skills in order to ensure that the time of the period is managed effectively by the teacher.

3) Employing this strategy requires providing teachers with courses in the field of pedagogy

One of the teachers added that employing this strategy requires providing teachers with courses in the field of pedagogy. Another teacher added that employing this strategy requires providing teachers with courses about this strategy in particular.

4) Employing this strategy requires having teachers with excellent classroom management skills

Five teachers added that employing this strategy requires recruiting teachers who have excellent classroom management skills. One of those teachers added that employing this strategy without possessing classroom management skills shall lead to having a mess in the classroom.

5) Employing this strategy requires exerting much effort by the teacher to plan for activities and scenarios that are based on this strategy

One teacher added this strategy requires exerting much effort by teachers for planning for the activities and scenarios that are based on this strategy. He also added that such plans must be developed in a systematic and goal-oriented manner.

3.5 Results and Discussion Related to the Study's Fifth Question

Q.5) What are the suggestions that can be proposed for raising the effectiveness of the process of employing the imaginative learning strategy in scientific courses in Emirati private schools?

1) Providing teachers with courses for developing their time management skills

Two teachers added that providing teachers with courses about time management skills shall allow them to employ this strategy by utilizing the duration of each period. That shall allow those teachers to avoid wasting time during the period.

2) Providing teachers with courses about pedagogy and this strategy

One of the teachers recommended providing teachers with courses about pedagogy. Another teacher recommended providing teachers with courses about this strategy and how to implement it. He recommended providing a course about using other strategies in conjunction with this strategy.

3) Providing teachers with courses for developing their classroom management skills

Five teachers recommended providing teachers with courses for developing their classroom management skills. That shall enable teachers to employ this strategy with having much discipline in the classroom.

4) Adding activities and scenarios that are based on this strategy to the curricula of scientific courses in the UAE

One teacher recommended adding activities and scenarios that are based on this strategy to the curricula of scientific courses in the UAE. She added that the Ministry of Education in UAE must ask the developers of such curricula to add such activities and scenarios.

4. Conclusion

Through conducting the present study, the researchers contribute to promoting awareness about the significance of employing the imaginative learning strategy in improving the quality delivered of education in scientific courses. Through this study, they contribute to promoting awareness about the barriers and challenges that might be faced when employing this strategy by the targeted teachers. Furthermore, the results of the analysis in this study contribute to improving the quality of education delivered in scientific courses. They contribute to improving the performance of the scientific courses teachers.

To be more specific, respondents have positive attitudes towards employing this strategy in scientific courses. In addition, employing this strategy in scientific courses contributes to promoting a sense of creativity among students and making learning enjoyable. It leads to improving the students' understanding for the material, raising their motivation to learn, and developing their decision making skills. It leads to developing students' language and thinking skills, and learning outcomes, and raising their achievement.

Regarding the barriers that might hinder the use of this strategy in scientific courses, they include: the need to have teachers with excellent time management skills and excellent classroom management skills. In addition, employing this strategy is deemed time consuming. Furthermore, it requires exerting much effort by the teacher to plan for activities and scenarios that are based on this strategy.

5. Recommendations

In light of the results, the researchers recommend:

- Holding courses for teachers in UAE about the use of the imaginative learning strategy in scientific courses

- Encouraging teachers in schools and kindergartens in UAE to use the imaginative learning strategy

- Adding activities that require employing this strategy to the curricula of scientific curricula

- Conducting studies about the barriers hindering the use of the imaginative learning strategy in scientific courses

- Conducting studies about the impact of the use of the imaginative learning strategy in scientific courses on achievement in the UAE

- Conducting studies about the impact of the use of the imaginative learning strategy in scientific courses on students' attitudes toward courses in the UAE.

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Appendix:

The Instrument: The **Interview Questions**:

At the beginning of each interview, the researchers collected data about the gender of each teacher and the Emirate he/she teach at. They also collected data about the course taught by each teacher. Then, they asked the sampled teachers the following questions:

1. To what degree do you employ the imaginative learning strategy in the course you teach?

2. What is the effectiveness of employing the imaginative learning strategy in the course you teach in improving the quality of education?

3. Does employing the imaginative learning strategy in the course you teach improve the learning outcomes?

4. Does employing the imaginative learning strategy in the course you teach improve the students' achievement?

5. Does employing the imaginative learning strategy in the course you teach improve the students' thinking skills?

6. Does employing the imaginative learning strategy in the course you teach improve the students' language skills?

7. Does employing the imaginative learning strategy in the course you teach improve the students' decision making skills?

8. Does employing the imaginative learning strategy in the course you teach raise the students' motivation to learn?

9. Does employing the imaginative learning strategy in the course you teach improve the students' understanding for the material?

10. Does employing the imaginative learning strategy in the course you teach make learning enjoyable?

11. Does employing the imaginative learning strategy in the course you teach promote a sense of creativity and innovation within students?

12. Do you face barriers and challenges when employing the imaginative learning strategy in the course you teach? If so, what are those barriers and challenges?

13. What are the suggestions that can be proposed for raising the effectiveness of the process of employing the imaginative learning strategy in scientific courses in Emirati private schools?