



مجلة دورية محكمة نصف سنوية تصدر عن مركز ممداد للدراسات والبحوث التربوية
العدد الأول من المجلد الرابع ٢٠٢٤

The degree of use of Chat GPT in educational practices in schools from the point of view of teachers

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مؤسسة تعليم بلا حدود/ممداد



جدول المحتويات

- ٦ مقدمة العدد
- ٤٨-٧ رئيس التحرير
- ٤٨-٧ قوة الأنا كمتغير مُعدّل للعلاقة بين الضغوط النفسية والمشكلات النفسية لدى طلبة الجامعة
- د. سهام عبد العزيز، منير حمود الشيخ حمود
- ٨٩-٤٩ مستوى معرفة معلمي الحلقة الأولى بطرق التعامل مع التلامذة ذوي صعوبات التعلم في مدارس الشمال السوري
- د. عبد الحى المحمود، عبد الرزاق عبد الكريم عليوي، أحمد عبد القادر عبد الله، موسى عبده الزعيم، عمار عصام مطر
- ١٢٤-٩٠ فاعلية برنامج تدريبي قائم على مدخل الجدارات الرقمية في تنمية مهارات التفكير الحاذق لدى مدرسي مادة الاجتماعيات
- د. أسعد حمود عبد الله، أحمد باقر عبد الكريم
- ١٥٨-١٢٥ جوانب من حقوق الطفل الاجتماعية والتربوية والمالية في الإسلام
- د. محي الدين بن المبارك عباسي
- ١٧٧-١٥٩ **The degree of use of Chat GPT in educational practices in schools from the point of view of teachers**
- Dr. Amal Muhammad Abdullah Al-Badou
- ٢٢٥-١٧٨ التحديّات التي تواجه البحث العلمي في العلوم الاجتماعيّة والإنسانيّة بالوطن العربي وآليات الارتقاء بجودته في ظلّ الأزمات
- د. هند محمود حجازي محمود
- ٢٧٣-٢٢٦ الدافعية للإنجاز وعلاقتها بمستوى التوافق الاجتماعي لدى الأطفال الصم وضعاف السمع في عدد من مراكز تأهيل ذوي الاحتياجات الخاصة
- عبد السلام سالم مسعود البوسيفي

مجلة
تربيا
للملوم التربوية والاجتماعية

المجلد الرابع - العدد الأول - ٢٠٢٤ م

مجلة دورية محكمة نصف سنوية

تصدر عن مركز مَدَاد للدراسات والبحوث التربوية

مؤسسة تعليم بلا حدود/مداد

مجلة تبيان للعلوم التربوية والاجتماعية

مجلة علمية دورية محكمة، تصدر عن مركز مداد للدراسات والبحوث التربوية، وتُعد بنشر الدراسات في العلوم التربوية والنفسية ودراسات علم الاجتماع، التي تتميز بالأصالة والمعاصرة والجديّة، كما تُسهم في تطوير الحقل المعرفي لموضوع الاختصاص. تصدر المجلة إلكترونياً كل ستة أشهر.

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مؤسسة بحثية مستقلة، تختص بالدراسات والاستشارات التربوية والنفسية والتنمية، وقضايا التعافي المجتمعي المرتبطة بالتربية والتعليم، وتعمل على رفد الحكومات والمنظمات والجهات الفاعلة بالدراسات والاستشارات والمشاريع التي يمكن الاعتماد عليها لوضع خطط مستقبلية بناءة، وتعد مؤسسة تعليم بلا حدود / مداد هي المؤسسة الأم للمركز.

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معايير النشر في المجلة

١. يجب أن تحتوي الصفحة الأولى من البحث على عنوان البحث واسم الباحث أو الباحثين، والتوصيف الأكاديمي والمنصب الوظيفي، والعنوان، والبريد الإلكتروني، وتاريخ البحث. إضافة إلى اسم الباحث، وتوصيفه الأكاديمي، ومنصبه الوظيفي باللغتين الإنكليزية والتركية.
٢. من أجل ضمان سرية عملية التحكيم، يجب عدم ذكر اسم الباحث أو الباحثين في صلب البحث، أو ذكر أية إشارات تكشف عن أشخاصهم، وعند رغبة الباحث أو الباحثين في تقديم الشكر لمن أسهم أو ساعد في إنجاز البحث، فيكون ذلك في صفحة مستقلة.
٣. تقديم ثلاثة ملخصات للبحث؛ باللغات العربية والإنكليزية والتركية، بحد أقصى (١٢٠) كلمة لكل منها، ويكون كل ملخص في صفحة مستقلة، على أن يحتوي الملخص على عنوان البحث، وخمس كلمات مفتاحية، وبدون ذكر أسماء أو بيانات الباحثين.
٤. لا تتجاوز عدد صفحات البحث بأي حال (٣٠ صفحة)، بما في ذلك المراجع، والجداول، والأشكال، باستثناء الملاحق.
٥. أنماط الكتابة وصيغتها تكون كالتالي: مقياس الصفحة (B5)، وبتباعد أسطر بقدر (١,٥)، وهوامش (٢ سم كحد أدنى) لكل من أعلى وأسفل وجانبي الصفحة، (شاملة الهوامش، والمراجع، والمقتطفات، والجداول، والملاحق).
٦. نمط الكتابة:

• للغة العربية: Traditional Arabic حجم الخط ١٤

• للغة الإنكليزية: Times New Roman حجم الخط ١٤

٧. أن يكون البحث المقدم إلى المجلة مدققاً؛ من الجوانب الإملائية واللغوية والنحوية.
٨. في حال استخدم الباحث أداة من أدوات جمع البيانات، فعليه أن يقدم نسخة كاملة من تلك الأداة، ترفق في طلب النشر.

٩. تعمل المجلة على تأصيل منهج البحث العلمي، وتؤكد بأن البحوث المرسله يجب أن تتكون من الأجزاء التالية:

مقدمة البحث، مشكلة البحث، أسئلة البحث، أهمية البحث، أهداف البحث، محددات البحث، التعريف بالمصطلحات، الدراسات السابقة، منهجية البحث، الإطار النظري والعملي (إن وجد)، عرض النتائج، مناقشة النتائج، التوصيات والمقترحات.

١٠. توثيق المراجع والمصادر، داخل البحث وفي قائمة المراجع، وفقاً لنظام جمعية علم النفس الأمريكية، سواء أكانت عربية أم أجنبية.

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Abstract

The study aimed to evaluate the integration of ChatGPT (Generative Pre-trained Transformer) in educational where the researcher designed the study tool (a questionnaire) consisting of (40) items distributed over (4) areas. It was distributed to a sample of (164) computer teachers, selected by a simple random method. The most important results were: the degree of application of the Chat GPT program in education in Jordan was 57%; the field of qualifying and training school teachers on the use of GPT chat received a high rating; the field of responsiveness of the Kingdom of Jordan's curricula to the application using GPT chat received an acceptable rating; the field of equipping the school environment with the material needs necessary to use the program and the field of educational software used received weak ratings. There are no differences between the members of the study sample due to differences in experience and educational level.

Key words: smart chat technology, educational practices, challenges, opportunities, anticipating the future.

درجة استخدام (Chat GPT) في الممارسات التعليمية في المدارس من وجهة نظر المعلمين

د. أمل محمد البدو

ملخص البحث

هدفت الدراسة إلى تعرف درجة استخدام الشات جي بي تي في الممارسات التعليمية، حيث قامت الباحثة بتصميم أداة الدراسة (استبانة) مكونة من (٤٠) فقرة موزعة على (٦) مجالات. تم توزيعها على عينة مكونة من (١٦٤) معلم ومعلمة من معلمي الحاسوب، تم اختيارهم بالطريقة العشوائية البسيطة، وكانت أهم النتائج:

- درجة تطبيق برنامج الشات جي بي تي في التعليم في الأردن كانت متوسطة بنسبة ٥٧٪، حيث حصل مجال تأهيل وتدريب معلمات ومعلمي المدارس على استخدام الشات جي بي تي على تقدير عالٍ، بينما حصل مجال استجابة مناهج المملكة الأردنية للتطبيق باستخدام الشات جي بي تي على تقدير مقبول، وحصل مجال تجهيزات البيئة المدرسية بالاحتياجات المادية اللازمة لاستخدام البرنامج ومجال البرمجيات التعليمية المستخدمة على تقديرات ضعيفة.
 - عدم وجود فروق بين أفراد عينة الدراسة تُعزى لاختلاف الخبرة، والمستوى التعليمي .
- الكلمات المفتاحية: تكنولوجيا الشات الذكي، الممارسات التعليمية، التحديات، الفرص، استشراف المستقبل.

Öğretmenlerin Bakış Açısından ChatGPT'nin Okullardaki Eğitim Uygulamalarında Kullanım Derecesi

Dr. Emel Muhammed El-Badou

Özet

Çalışma, ChatGPT'nin eğitim uygulamalarında kullanım derecesini belirlemeyi amaçlamaktadır. Araştırmacı, 6 alana dağıtılmış 40 maddeden oluşan bir anketi araştırma aracı olarak tasarlamış ve basit rastgele yöntemle seçilmiş 164 bilgisayar öğretmeninden oluşan örnekleme bu anket dağıtılmıştır. Araştırma neticesinde ulaşılan başlıca sonuçlar şunlardır: Ürdün'de ChatGPT programının eğitimde uygulanma derecesi, ortalama %57 düzeyinde bulunmuştur, Öğretmenler ChatGPT kullanımı konusundaki yeterlilik ve eğitimleri alanında yüksek bir puan almıştır, Ürdün Krallığı müfredatının ChatGPT kullanımına uygunluğu alanında kabul edilebilir bir puan alınmıştır, Programın kullanımı için okul ortamlarının gerekli materyaller ile donatılması ve kullanılan eğitim yazılımları alanı ise düşük bir puan almıştır. Araştırma örnekleme üyeleri arasında deneyim ve eğitim düzeyi değişkenlerine bağlı olarak anlamlı bir fark bulunmamıştır.

Anahtar Kelimeler: Akıllı Sohbet Teknolojisi, Eğitim Uygulamaları, Zorluklar, Fırsatlar, Geleceğe Dair Öngörü.

the introduction:

The current era is witnessing tremendous progress in the field of technology and the development of artificial intelligence, which is greatly affecting various aspects of daily life, including the field of education. Digital transformation in education is an important challenge faced by the educational system around the world, as it seeks to adapt traditional educational practices to modern technology to improve the learning experience of students and enhance learning outcomes. In this context, ChatGPT comes as an innovative and promising tool to transform the educational process, as it represents a linguistic model based on deep learning and artificial intelligence. GPT chat is distinguished by its ability to interact linguistically chat naturally with students and provide comprehensive and understandable answers in the learning context. Within a few decades, the world has transformed from a society that relied on machines to a society that relied on information in light of massive technological transformations led by artificial intelligence.

the study Problem:

GPT smart chat technology is one of the innovative tools in the educational field that aims to enhance the learning process and provide a distinguished educational experience for students. Its various uses in schools arouse the interest of researchers, teachers, and decision-makers in the field of education. Highlighting the challenges that schools and teachers face when adopting this technology. The problem of the study is summarized in the following main question: What is the degree of use of Chat GPT in educational practices in schools from the point of view of teachers?

Study questions:

1. What is the quality of training of teachers in their schools to use Chat GPT?
2. What is the quality of the curricula in terms of their response to data on the use of Chat GPT?

3. What is the quality of the school environment equipment in Kasbah Amman with the material needs (computers and accessories) necessary to use Chat GPT?

4. What is the quality of educational software used in schools to use Chat GPT?

5. Are there statistically significant differences at the significance level ($\alpha = 0.05$) in the response of the study sample members to the items in the areas of the study questionnaire due to the variables (years of experience, educational level)?

Objectives of the study:

1. Highlight the training needs and infrastructure required to support the use of Chat GPT in schools.

2. Know how Chat GPT can be adapted to the curriculum and design educational activities.

the importance of studying:

1. This study contributes to describing and documenting the use of Chat GPT in educational practices in schools and providing a deep understanding of the experiences and challenges faced by teachers and students in this context.

2. The study can be a basis for making decisions and developing educational policies related to the use of Chat GPT in schools, and providing the necessary evidence to make effective, evidence-based decisions.

3. The study works to fill the gap in scientific knowledge regarding the use of Chat GPT in educational practices in schools and contributes to enriching knowledge and scientific literature in this field.

4. The study can contribute to stimulating public debate about the role of technology in education and the use of Chat GPT as an educational tool.

Terms and definitions:

"ChatGPT is a language model based on the GPT-3.5 architecture for modeling and understanding human language. ChatGPT has been trained on billions of words, sentences, and texts written in English and many other languages. It relies on artificial intelligence techniques such as machine learning, deep neural networks, and graph mining to understand natural language and generate text. ChatGPT is considered one of the most powerful and advanced linguistic models to date, and it represents an important advancement in the field of linguistic technology and human communication enhancement. It is utilized in various applications, including chatbots, intelligent chat assistants, text analysis, text generation, machine translation, language prediction, and other applications that demand precise linguistic comprehension and text production" (Khattab, 2023).

Method: a descriptive survey

The limits of the study:

Objective limitations: The subject of the study was limited to the reality of using Chat GPT in educational practices in schools from the point of view of teachers.

Spatial boundaries: a sample of computer teachers, male and female, in the Kasbah of Amman.

Time limits: 2022/2023

Theoretical literature and previous studies:

Applications of artificial intelligence in education:

1. Smart Content: Educational robotics software is utilized to develop digital content. This ranges from simply using artificial intelligence to digitize textbooks to creating interactive content and applied educational interfaces.

2. Intelligent Educational Robots: These robots can function in independent teaching roles or as teaching assistants. They can employ and integrate human knowledge

from various fields and specializations. Moreover, they can train learners on comprehensive capabilities and knowledge targeted by the entire educational process at their academic stage. One notable example is the Duolingo platform, which utilizes command processing applications and educational robotics software to create and tailor language lessons to the level and abilities of individual learners.

3. Assessment and Evaluation: Artificial intelligence ensures accurate, efficient, and speedy performance of tasks such as automatic grading and grade monitoring, providing detailed evaluations, assessing students' understanding, and deriving conclusions from learners' feedback to enhance the educational system.

4. Dynamic Scheduling and Predictive Analysis: By analyzing assessment and evaluation data and learners' interaction with smart learning systems or various educational robots, artificial intelligence learns learners' habits. Based on this data, it suggests the most efficient study schedule and provides recommendations to teachers regarding curriculum focus areas.

5. Artificial Intelligence Virtual Reality: This involves integrating artificial intelligence with virtual reality technologies to provide sensory and visual stimulation to learners. It aims to deepen their understanding of learning subjects and provide vibrant interactive learning environments, enabling independent learning and free exploration". (Al-Hujaili, Al-Farani, 2020).

Chat GPT can be used in educational practices in schools in several ways, including:

1. Promoting independence and social communication.
2. Customizing education according to individual needs.
3. Developing critical thinking skills.

4. Stimulating interest and excitement in educational materials.
5. Providing additional reviews and training.
6. Promoting continuous learning (Al-Dosmani, 2023).

Anticipating the future of school education using chat GPT includes:

1. Technology development.
2. Smart learning integration.
3. Promoting active learning.
4. Expanding the scope of use.
5. Integration of distance learning.

state of the art:

A study by (Kuhail, 2022), the study provides a systematic review of 36 research papers to understand, compare, and reflect on recent attempts to use chatbots in education. The results showed that chatbots are mainly designed on a web platform for teaching computer science, language, general education, and some other fields such as engineering and mathematics.

A study (Vanichvasin, 2022), aimed to study the impact of chatbots on the form of successful entrepreneurs with 24 first-year graduate students, who were enrolled in a master's degree in entrepreneurship education at Kasetsart University. This study indicated that chatbot technology positively impacted student learning and satisfaction. It can be implemented as a powerful tool for teaching entrepreneurship in entrepreneurship education programs in the context of higher education.

The study (Neto & Fernandes, 2019). Learning management systems have been used to enhance remote collaboration. However, characterizing and identifying relevant aspects of LMS collaboration to continuously encourage learning remains a challenging problem. This paper addresses this related issue and proposes a conversational agent, also known as Chatbot, that adopts conversation analysis,

currently used to determine social network personalization, to learn about the context of distance education. The goal of this recognition is to make appropriate interventions in the design and monitoring of online collaborative activities and to encourage discussion among students through the use of the structure of academic productive talk.

Validity and reliability of the instrument:

The researcher verified the validity of the content of the tool - which indicates the suitability of the tool for the purpose for which it was developed - by presenting it to several arbitrators, in the field of educational techniques and curricula in some Arab universities, and included their comments. The tool in its final form consisted of four areas :

- The field of qualifying male and female teachers (teachers' awareness of the use of Chat GPT).
- Curriculum field (adaptation of curriculum elements to the use of Chat GPT).
- Software field (software needed to use Chat GPT).
- The field of environment equipment (the physical requirements for using Chat GPT).

Each field consists of ten paragraphs covering the various information required about the field, bringing the total number of paragraphs to (40). As for the stability of the tool, it was verified through the method of correlation index between the survey and the re-survey, by applying the study tool (the questionnaire) to a survey sample from outside the study sample consisting of (20) female teachers and re-applying it to the same group after (18) days and calculating The Pearson correlation coefficient between the performance of the respondents in the first application and the repeat. The correlation coefficient between the two responses was (0.84), which is considered within the appropriate level.

Results:

Answer to the first question: What is the quality of training of teachers in their schools to use Chat GPT?

There is a high consensus among members of the study sample on the quality of training teachers in their schools to use Chat GPT, as the average performance of the study sample in the field was (3.44) with a standard deviation of (0.71) which falls within the high category that ranges from (greater than 3.40 to 4.20). It is also noted that the three items with the highest approval rating were the eighth paragraph, which stated, "I see that male and female teachers are qualified to use educational word processing applications." It obtained an average of (4.13) with a standard deviation of (0.34), followed by the fifth paragraph, which stated: "I see that male and female teachers are qualified to use applications for displaying educational content electronically." It obtained an average of (4.02) with a standard deviation of (0.35). followed by the seventh paragraph, which stated, "I see that male and female teachers are qualified to use educational image processing applications." It obtained an average of (3.91) with a standard deviation of (0.62), which means that a high percentage of female teachers in Amman's schools can deal with applications. Processing educational texts, such as printing, output, and formatting, applications for preparing and designing presentations, and applications for processing still educational images. As for the paragraphs that received the lowest degree of approval within the field of the reality of qualifying and training male and female school teachers in the city of Amman to use Chat GPT, it was the second paragraph that stated, "I see that Male and female teachers are familiar with the characteristics of using Chat GPT, as they obtained an average of (2.55) with a standard deviation of (0.61), followed by the third paragraph that stated, "I see that male and female teachers are qualified to plan lessons for using Chat GPT where they obtained an average of (2.71) with a

standard deviation of (0.72), followed by the first paragraph that stated, "I see that male and female teachers are aware of the importance of using Chat GPT". It obtained an average of (3.18) with a standard deviation of (0.74), which means that there is a feeling of deficiency in training. Training male and female teachers in cognitive aspects, including identifying the characteristics of using Chat GPT, and the ability to plan lessons.

Answer to the second question: What is the quality of the curricula in terms of their response to data on the use of Chat GPT? There is a weak consensus among members of the study sample regarding the quality of Jordan's curricula in terms of their response to data on the use of GPS Chat, as the average performance of the study sample in the field was (2.59) with a standard deviation of (1.08), which falls within the category (weak), which ranges from (greater from 1.80 to 2.60).

It is also noted that the three items with the highest approval rating were the sixth paragraph, which stated: "I see that the teacher's guide explains the use of artificial intelligence tools, including Chat GPT," as it obtained an average of (3.10) with a standard deviation of (0.93), followed by the second paragraph. Which stated, "I see that the content of the curriculum is consistent with the objectives of the curriculum, taking into account the trend toward using Chat GPT." It obtained an average of (2.91) with a standard deviation of (0.89), followed by the first paragraph, which stated, "I see that the objectives of the curriculum have taken into account the orientation toward Using Chat GPT, I obtained an average of (2.86) with a standard deviation of (0.91). As for the items that received the lowest degree of approval within the field of the reality of the response of the Kingdom of Jordan's curricula to implementation using Chat GPT, it was the eighth that stated: "I see that there are sufficient and easy-to-use electronic containers and tools attached to the paper textbook," as it obtained an average of

(1.77). With a standard deviation of (1.28), followed by the ninth paragraph, which stated: "I see that the computer curriculum has been appropriately graded according to the age stages of the learners." It obtained an average of (1.86) with a standard deviation of (1.28), followed by the seventh paragraph, which stated, "I see that textbooks are written in a way that takes into account the use of Chat GPT." It obtained an average of (2.42) with a standard deviation of (1.2). Chat GPT, and also knowing the importance of using Chat GPT in increasing the efficiency and effectiveness of the educational process.

Answer to the third question: What is the quality of the school environment equipment in Kasbah Amman with the material needs (computers and accessories) necessary to use Chat GPT?

There is a weak consensus among members of the study sample about the quality of school environment equipment in the Kasbah of Amman regarding the material needs (computers and accessories) necessary for using GPT. The average performance of the study sample on the items related to the field was (1.95), with a standard deviation of (1.11), which is Within the weak category, which ranges between (greater than 1.80 to 2.60). It is also noted that the three items with the highest approval rating were the first paragraph, which stated: "There are sufficient computers for students," which obtained an average of (2.63) with a standard deviation of (1.3), followed by the seventh paragraph, which stated: "All school devices are connected to the Internet," as it obtained an average of (2.27) with a standard deviation of (1.53), followed by the second paragraph, which stated: "There are data display devices in all classrooms," as it obtained an average of (2.20) with a standard deviation of (1.52). As for the paragraphs that received the lowest degree of approval within the field of the reality of school environment equipment with the material needs (computers and accessories) necessary for using Chat GPT, it was the third paragraph

that stated: "There are smart boards in all the halls," as it obtained an average of (1.34). With a standard deviation of (0.92), followed by the fourth paragraph, which stated: "All devices are connected to central paper printers," it obtained an average of (1.38), with a standard deviation of (0.49), followed by the tenth paragraph, which stated: "There are security systems suitable for using GPT." "Chat" obtained an average of (1.71) with a standard deviation of (1.01), which means the paragraph is weak.

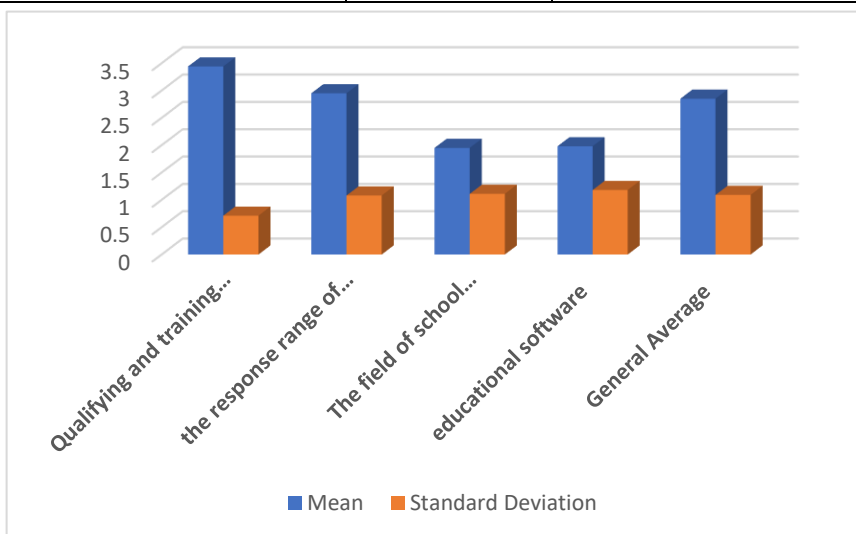
Answer to the fourth question: What is the quality of educational software used in schools to use Chat GPT?

There is a weak consensus among members of the study sample regarding the quality of the educational software used in schools for using Chat GPT, as the average performance of the study sample on the items related to the field was (1.98), with a standard deviation of (1.18), which falls within the category (weak), which ranges from (greater from 1.80 to 2.60). It is also noted that the three items with the highest approval rating were the ninth paragraph, which stated, "The available programs are up-to-date," as it obtained an average of (2.23) with a standard deviation of (1.35), followed by the seventh paragraph, which stated, "There are virus and software protection programs." "Harmful," as it obtained an average of (2.23) with a standard deviation of (1.5), followed by the tenth paragraph, which stated, "Programs available in original copies," as it obtained an average of (2.11) with a standard deviation of (1.06). As for the items that received the lowest degree of approval within the field of the reality of educational software used in schools for using Chat GPT: Was the eighth paragraph, which stated: "There is a library of various service programs available to everyone," as it obtained an average of (1.7) with a standard deviation of (1.07), followed by the sixth paragraph, which stated: "There are digital content design programs available to everyone," where it obtained It received an average of (1.77) with a standard deviation of (0.84), followed by the

first paragraph that stated: "The programs available are original copies," which obtained an average of (2.11) with a standard deviation of (1.06).

The following table and figure summarize the previous results:

Areas	Mean	Standard Deviation
Qualifying and training school teachers on using GPT chat	3.44	0.71
the response range of the Kingdom of Jordan's curricula for implementation using GPT	2.95	1.08
The field of school environment equipment in the city of Amman with the necessary material needs (computers and accessories)	1.95	1.11
educational software	1.98	1.18
General Average	2.85	1.09



Answer to the fifth question: Are there statistically significant differences at the significance level ($\alpha = 0.05$) between the averages of the responses of the study sample members to the study tool due to the difference in the levels of the experience variable and the levels of the education variable?

There are no statistically significant differences at the level of significance ($\alpha = 0.05$) between the averages of the responses of the

study sample members on the study tool due to the different levels of the experience variable (less than 3 years, from 3 to 6 years, more than 6 years), where the value was 0.542 with a probability Its value is 0.583, which is greater than (0.05). This means that the estimates of the study groups according to the experience variable are statistically similar despite the slight numerical differences between them.

There are no statistically significant differences at the level of significance ($\alpha = 0.05$) between the averages of the responses of the study sample members on the study tool due to the different levels of the educational level variable (high school or equivalent, bachelor's, master's), as the value was 0.891 with a probability of 0.412, which is greater than (0.05). This means that the estimates of the study groups according to the educational level variable are statistically similar, despite the slight numerical differences between them.

What are the training and infrastructure needs required to support the use of chat GPT in schools?

1. Privacy and data policies.
2. Encryption and technical security.
3. Informed consent and awareness.
4. Teacher training.
5. Review the platform and contract with a reliable provider.
6. Monitoring activity.
7. Use of security technology.
8. Continuous evaluation and improvement.
9. Secure storage.
10. Risk management.
11. Contacting the digital security community.
12. Software updates and security patches.
13. Transparency and communication. (Al-Sayed, 2023)

How can chat GPT be adapted to the curriculum and design of educational activities?

1. Determine educational objectives.
2. Designing interactive activities.
3. Organizing educational content.
4. Use of multimedia.
5. Monitor progress and evaluate performance.
6. Providing guidance and support.
7. Diversity and Interaction.
8. Following the development of educational technology (Khan, 2023).

Recommendations:

1. Schools should prioritize training sessions and workshops to familiarize teachers with Chat GPT and its potential applications in the classroom. This training should encompass not only technical aspects but also strategies for integrating Chat GPT effectively into various educational activities.

2. Educational institutions should collaborate with developers to create educational resources and content tailored to Chat GPT. This includes interactive lessons, quizzes, and simulations designed to enhance student engagement and learning outcomes.

3. Teachers should be encouraged to experiment with different approaches to using Chat GPT in the classroom and to adapt their strategies based on student feedback and evolving educational needs.

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