PAPER

Development of the Creative Potential of Future Teachers Based on Smart Education

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ABSTRACT

The purpose of this research is to examine the impact of smart education on the development of the creative potential of future teachers. If we consider the research as a model, we can see that it was formed using the mixed method. The study group consisted of 172 teacher candidates who are pursuing their education at various universities in Almaty, Kazakhstan. It is noted that the data collection tools used in the research included a semi-structured interview form that was developed by the researchers and supported by experts in the field. The analysis of the quantitative data from the research was conducted using a statistical programme. In addition to calculating percentages, frequencies, and means, independent variables t-tests and one-way analyses of variance were applied. For the analysis of the qualitative data from the studies, they were grouped and analysed. As a result of the research, it has been determined that teacher candidates who use smart education have high creative potential.

KEYWORDS

online education, teacher candidate, intelligent education, creative potential

1 INTRODUCTION

In today's rapidly developing world, characterised by advancements in technology and science, it is widely recognised that students who possess problem-solving skills, effective communication abilities, a willingness to take risks, and the ability to innovate are increasingly in demand [1]. When considering the current conditions, it is evident that the potential for creativity seeks to select the most accurate option. It is also observed that societies continuously engage in a cycle of competition with each other as long as teacher training is conducted [2]. While it has caused students to learn more in previous periods, it also creates a desire for teachers to be productive and successful in more technological and online environments, which is crucial for the future of today's societies [3]. It will be possible for individuals and aspiring teachers to achieve these goals by moving away from traditional stereotypes,

actively seeking answers through technology and smart education research, and adopting a more proactive approach to teaching that focuses on better and more effective education [4].

"Smart education" is defined as the effective and coordinated use of information and communication technology to achieve a learning outcome using a suitable pedagogical approach. Zhu and He [5] offered an earlier definition, stating that 'the essence of smarter education is to create intelligent environments by using smart technologies, so that smart pedagogies can be facilitated to provide personalised learning services and empower learners to develop wisdom talents that have better value orientation, higher thinking quality, and stronger conduct ability'. The concept of education in the digital era represents a new interpretation of smart education [6]. Smart education is 'about providing tailored learning everywhere and anytime', according to Bajaj and Sharma [7]. Additionally, proponents argue that smart education encompasses studying beyond the limitations of conventional classrooms and is a flexible endeavour. According to Jang [8], smart education is 'an educational system that enables students to study with varied resources based on their aptitudes and intellectual abilities, and it helps kids learn by employing cutting-edge technology'. The goal of smart learning environments, often referred to as smart education, is to enhance learning processes. They 'represent a new wave of educational systems, involving an effective and efficient interplay of pedagogy, technology, and their integration' [9]. Keep in mind that smart education goes beyond technology. New methods of instruction and learning are also involved [10].

Analysing the pedagogical features of smart education is beneficial. Zhu et al. [11] provided the following explanation of the distinguishing characteristics of smart learning:

1. Position-aware: In intelligent learning, real-time information about the learner's position is crucial for the systems to customise the scenario and content for them.
2. Context-aware: Investigating different informational contexts and activity scenarios.
3. Social awareness: Seeing interpersonal connections.
4. Interoperable: Establishing guidelines for various platforms, services, and resources.
5. Seamless connection: Providing continuous support upon device connection.
6. Adaptable: Adjusting educational materials based on demand, desire, and accessibility.
7. Pervasive: Anticipating learner needs before they are expressed and providing clear and visual access to learning materials and services.
8. Complete record: Gathering information about learning paths to thoroughly mine and analyse, then offering judicious evaluations, recommendations, and promoting on-demand services.
9. Natural interaction: Transmitting multimodal senses, such as recognising position and facial expressions.
10. High engagement: Immersion in technology-enhanced settings with multidirectional interactive learning experiences.

In summary, in smart learning, real-time location may be crucial for customising the scenario and material for the learner. However, in smart learning, location is not always a prerequisite. The system's ability to anticipate and provide advice to learners is its most crucial feature. "Smart learning", a learning method, offers guidance to students on how to study effectively in the real world [12]. When comparing the

learning-teaching process using smart education and the "smart board" used in the classroom, standard smart classrooms are teacher-led learning spaces that typically consist of a computer, interactive whiteboard, and projector. Like a traditional class, teachers deliver front-of-class learning. However, in smart education, students are provided with more opportunities to interact with the content, the teacher, and each other. Students can also interact with other sources, experts, and students from different schools, including those from international institutions. In fact, international interactions are becoming easier day by day due to technological advancements in the field of language translation.

Cabi [13] stated that in education, it is essential to eliminate simplistic thinking and cultivate qualities that foster innovative and intelligent learning. It can be said that teacher candidates' basic needs in terms of creativity potential are experiences that are unexpected, unconventional, and create contradictions [14]. In all of these environments, the creative potential is not sufficient to foster critical thinking. Even some intelligent educational models and learning situations are known to enhance creative potential [15]. In these educational situations, one important aspect of future professional practitioner education for prospective teachers is the expectation for students to learn in educational environments where subjects are taught with a superficial understanding of the meaning and application of educational expectations [16].

The creativity of teacher candidates can foster an environment that promotes intellectual engagement, practicality, and integration with education. It is known that students require such conducive conditions to unleash their creative potential [17]. Educators who associate creativity solely with art may hold unrealistic beliefs that it encourages children to do whatever they want, has no benefits for children, wastes educational time, and leads to confusion and disorganisation. Some teachers view creativity-related activities as after-school or extracurricular activities [18]. Some parents also view creativity as a game or a waste of time. It is observed that individuals who hold such beliefs about creativity do not allocate a space for creativity in the educational curriculum [19]. We can say that the creative potential deduced from this interpretation manifests itself in science, technology, games, work, and all other activities in our daily lives.

Changes in smart education technology have not only transformed the types of jobs available but also revolutionised communication. It is now more important than ever to be a global citizen, a critical consumer of information, and to communicate effectively with people who have global awareness [20]. New forms of communication have shown that the concept of distance should be considered multidimensional. It is evident that addressing the challenges arising from new borders has become essential and obligatory. Aspects that impact society and its people, as well as every individual and institution involved in educational organisations, particularly in the field of education, have been and will continue to be significantly affected by this transformation [21–23].

New technologies, particularly those with creative potential, have had a significant impact on all information processes [24]. This process, which creates a new learning environment, is known to mark the beginning of a completely different era in terms of learning spaces and teacher candidates [25]. The learning environment, which is a concept widely discussed in educational literature, has evolved in our century. This new learning environment opens up an unlimited world guided by keys and connections and becomes a stimulating environment for discussing fundamental aspects such as the nature, meaning, reflection, source, and truth dimensions of knowledge [26].

1.1 Related studies

Cui's study [27] examined the integrated multimedia teaching model for technical support to enhance student learning in an intelligent education system. The study also explored language-based teaching practices aimed at improving the comprehensive capacities of the students. It has been observed that the results of the multimedia teaching model, which is based on the smart education system, fulfil the learning requirements of the students.

Homen and Dumancic [28] conducted research on the implementation of new digital education technologies. Their aim was to identify the fundamental components of education development across all levels, including preschool programmes, university programmes, and adult education. They have reached the conclusion that the fundamental aspects of smart education will be advantageous for future educators. Additionally, they have found that strategic planning of educational development plays a crucial role in the preparation, implementation, and evaluation of the teaching process (pedagogical dimension), as well as in equipping school infrastructure with new technologies (technological dimension).

Guo et al.'s [29] research aimed to provide a comprehensive overview of the literature on intelligent education. This included analysing publication outputs, major categories, influential countries, organisations, journals, and authors. The study also identified key documents and academic trends in intelligent education. The findings of the research offer valuable and innovative suggestions for researchers and practitioners in this field. Furthermore, the study highlights the significance of the intelligent education model for individuals.

Considering the studies conducted in this context, it can be said that the concept of innovative education holds significant value both in the literature and in the field. This research suggests that incorporating smart education and fostering creative thinking potential will benefit future teachers and lead to the development of more qualified students.

1.2 Purpose of study

The purpose of this research is to examine the impact of smart education on the development of the creative potential of future teachers. The research seeks answers to the following questions:

1. What is the average score of pre-service teachers in smart education?
2. Does the potential for creativity in teacher candidates differ based on gender?
3. Do the opinions of pre-service teachers vary based on the class variable?
4. How do prospective teachers evaluate the impact of online education on its creative potential?
5. How do prospective teachers evaluate the advantages of online education that contribute to its development in smart education?
6. How do prospective teachers evaluate the drawbacks of online education that hinder the advancement of smart education?

2 MATERIALS AND METHOD

This section of the study includes information about the research method, the study group, the data collection tools, the data collection and processing stages, and the ethical principles.

2.1 Research method

It is observed that the study utilised a mixed-model approach, incorporating both quantitative and qualitative research methods. Mixed-methods research is a research model in which the researcher collects and analyses data, incorporates findings, and makes inferences using qualitative and quantitative approaches or methods in a single study or research programme. In addition, the mixed method is also known as a model in which student views are handled both in an open-ended manner and statistically.

The primary objective of this approach's model is to ensure that the results obtained through qualitative and quantitative methods are consistent, corroborative, and aligned with each other [30]. In this study, we will further explore the impact of smart education on the development of future teachers' creative potential.

2.2 Participants

Considering the participants' demographics for the study, it is observed that the study group comprises 172 teacher candidates who are currently pursuing their education at different universities and have prior experience with online education during the spring academic year of 2022–2023 in Almaty, Kazakhstan. The qualitative part of the research involved randomly selecting 21 pre-service teachers from a pool of 172 participants. The demographic characteristics of the teacher candidates participating in the research are presented in Table 1.

Table 1. Demographic characteristics of primary school teachers

	F	%
Gender		
Male	92	53.49
Female	80	46.51
Class		
Second class	50	29.07
Third class	62	36.05
Fourth class	60	34.88

Table 1 displays the demographic characteristics of the participant groups involved in the research. It can be observed from the table that out of the teacher candidates who participated in the research, 92 (53.49%) were female and 80 (46.51%) were male. Fifty of the pre-service teachers who participated in the research stated that they were educated in second grade (29.07%), 62 of them stated that they were educated in third grade (36.05%), and 60 of them stated that they were educated in fourth grade (34.88%).

2.3 Data collection tools

This section of the research provides a detailed explanation of the data collection tools. The researchers have chosen to use a semi-structured interview format to gather information about the data collection tool and its impact on smart education and creative thinking potential.

Intelligent education and creative thinking potential interview form: The 'intelligent education and creative thinking potential interview form', one of the data collection tools of the research, is created by the researchers before this study and is seen when the design part is finished. The validity of the data collection tool was established by following the steps outlined below.

Simplicity and understandability: At this stage, the 'intelligent education and creative thinking potential interview form' was prepared in the Kazakh language, and the inappropriate words were removed from the form. In addition, a simpler vocabulary was chosen and arranged for the students to better understand the participant groups. This process was initially supported by three experts, and an interview form was prepared and conducted.

Establishing the pilot practice sample group: At this stage, a pilot sample group of 168 pre-service teachers with experience in the field of smart education and creative thinking was formed to pilot the interview form. Out of the primary school teachers, 82 are female and 86 are male. Pre-service teachers who were included in the pilot study sample group were excluded from the main sample group of the study.

Exploratory factor analysis: The SPSS 25.0 statistical programme was used for exploratory factor analysis. In the exploratory factor analysis, first, the suitability of the data set for the analysis was evaluated and calculated. Exploratory (or explanatory) factor analysis is a dimension reduction method that enables working with a smaller number of sub-dimensions compared to the number of items in a large dataset. It is seen that the factor loadings of the first factor of the data collection tool, which includes eight items and is called 'intelligent education', vary between 0.71 and 0.79. The factor loads of the second factor of the data collection tool, which includes eight items and is called 'creative potential', vary between 0.63 and 0.72. The third factor, known as 'online education', was found to consist of eight items with factor loads ranging from 0.67 to 0.81.

Reliability study: The consistency of the data collection tool was assessed using Cronbach's alpha internal consistency coefficient. The Cronbach's alpha internal consistency coefficient of the 'smart education' factor was calculated as 0.84, and the Cronbach's alpha internal consistency coefficient of the 'creativity potential' factor was calculated as 0.82. When analysing the Cronbach's alpha internal consistency coefficient for the general teacher candidates, a value of 0.83 was found. While calculating the score of the 5-point Likert-type scale, 'strongly agree' was assigned a value of 5, 'slightly agree' 4, 'moderately agree' 3, 'little agree' 2, and 'strongly disagree' 1 point. In addition, the item score ranges obtained from the data collection tool were accepted as equal, between 1.00 and 1.79 'I strongly disagree', between 1.80 and 2.59 'I agree slightly', between 2.60 and 3.39 'moderately agree', between 3.40 and 4.19 'I disagree', and between 4.20 and 5.00 'strongly agree'.

The effect of teacher candidates on online education semi-structured interview form: The researchers created a semi-structured interview form on the effect of pre-service teachers on online education' to collect qualitative data for the study. To assess the content validity of the research, three semi-structured interview questions that were formulated during the development of the semi-structured interview form were consulted, and the opinions of the participants were obtained. The comprehensibility of the questions was evaluated by administering the interview questions that were developed based on the expert opinions of six teacher candidates. The semi-structured interview form was finalised with input from the teacher candidates. The semi-structured interview form prepared for use in the study is provided in Table 2.

Table 2. The effect of pre-service teachers on online education semi-structured interview form

1. How do you evaluate the impact of online education on the creative potential of teacher candidates? Give your opinion by choosing one of the options below.			
Very effective in a positive way ( )		Very effective in a positive way ( )	
Ineffective ( )	Negatively effective ( )	Negatively Very effective ( )	
Participant opinion:			
. . . .			
. . . .			
2. How do you evaluate the advantages of online education that enable teacher candidates to be developed with smart education?			
Participant opinion:			
. . . .			
. . . .			
3. How do you evaluate the disadvantages of online education that prevent the development of teacher candidates with smart education?			
Participant opinion:			
. . . .			
. . . .			

When examining Table 2, the impact of pre-service teachers on the semi-structured interview form for online education is presented. It is seen that there is one closed-ended question in the form and two open-ended questions along with another question.

2.4 Data collection process

It is observed that the data gathered in the study were collected in two stages. The first phase is the pilot application of the data collection tool, which aims to simplify and improve the understanding of the interview form to be used in the research. In the second stage, the researchers studied a sample group of pre-service teachers. Data collection tools were delivered to teacher candidates via an online survey conducted through MS Teams. It takes approximately 10 weeks to collect all the data and deliver it to the researchers.

2.5 Compliance with ethics

When considering research, it is evident that ethical principles guide the research approach in every aspect of ethical dimensions. When all the data in the study has been collected, it is evident that all necessary permissions have been obtained for the application of the data collection tool to the students. A consent form, stating that the study group voluntarily participated in the research, was prepared and collected from the teacher candidates. In addition, a statement was made to the participants, assuring them that the values of this study would be kept confidential. It was emphasised that both work data and personal information would be treated as confidential.

Participants were informed that their data would be published using a code name to ensure anonymity and that it would not be used for any other purpose or shared elsewhere.

2.6   Data collection analysis

All the findings obtained from the quantitative dimension of the study were analysed using the SPSS 25.0 statistical programme, and tables were generated. In addition to calculating percentages, frequencies, and means, support was obtained by applying independent *t*-tests and one-way analysis of variance (ANOVA). For the analysis of the qualitative data from the studies, they were grouped and analysed. Each value applied in a grouping or content analysis is also known as an analysis technique aimed at discovering the meanings in various types of text, such as audio, video, visual, etc., and organising them into these groupings. It can be any content that contains symbols and meanings [31]. In this study, the impact of online education on teacher candidates will be examined by analysing the data obtained from semi-structured interviews. The findings will be presented in frequency and percentage tables using content analysis.

3   RESULTS

In this section of the study, we present the findings from the semi-structured interviews conducted with pre-service teachers regarding smart education, creative potential situations, and the impact of online education on them.

3.1   Findings regarding the data collection tool applied for pre-service teachers

In Table 3, the research provides the weighted average and standard deviations of the teacher candidates who participated in the study on the topic of smart education in general, as well as its sub-dimensions.

Table 3. Smart education weighted average and standard deviation of teacher candidates

	M	SS
Level and regular education	3.64	0.786
Feeling well and motivation	3.61	0.734
Creativity potential	3.72	0.854
General views of pre-service teachers	3.66	0.791

In Table 3, it can be observed that there is a sub-dimension for level and regular education (M = 3.64, SD = 0.786), a sub-dimension for feeling good and motivation (M = 3.61, SD = 0.734), a sub-dimension for creativity potential (M = 3.72, SD = 0.854), and the overall opinions of the pre-service teachers (M = 3.66, SD = 0.791) are presented with weighted means and standard deviations. From this perspective, Table 3 reveals that the pre-service teachers exhibit a high level of creativity in the data collection tool, smart education sub-dimensions, and overall.

In Table 4, the *T*-test findings of the independent variable (creative potential) of teacher candidates participating in the research are presented, categorized by gender.

Table 4. Independent variables (creativity potential) *T*-test results

Gender	*N*	*M*	SS	*F*	*p*
Female	92	3.68	0.794	6.741	.301
Male	80	3.62	0.807		

In Table 4, the evaluation of the creativity potential of the teacher candidates participating in the research presented based on the gender variable. Based on the results of the independent variables *T*-test, it was observed that there was no significant difference in the creativity potential of teacher candidates based on gender ($F = 6.741$, $p > 0.5$). However, it was found that both female and male participants exhibited high values in this area.

In Table 5, it can be observed that a one-way ANOVA analysis was conducted to determine if there is a significant difference in the views of the participant groups based on the class variable.

Table 5. One-way ANOVA findings

Class	*N*	*M*	SS	*F*	*p*
Second class	50	3.40	0.748	15.428	.000
Third class	62	4.12	0.634		
Fourth class	60	4.09	0.674		

In Table 5, the creativity and opinions of the pre-service teachers included in the study were evaluated based on the class variable. It was determined that there was a significant difference between the findings of the one-way ANOVA and the findings of the prospective teachers based on the class variable ($F = 15.428$, $p < 0.5$). It was determined that there was a significant difference in favour of the pre-service teachers in the third and fourth-grade groups.

3.2 The effects of the semi-structured interview form on the creative potential of pre-service teachers attending classes with online education

In Table 6, the evaluations of the teacher candidates who participated in the research on the impact of online education on creative potential are provided.

Table 6. Pre-service teachers' evaluations on the effect of online education on its creative potential

Category	*F*	%
Very effective in a positive way	6	28.57
Positively effective	11	52.39
Ineffective	2	9.52
Negatively effective	1	4.76
Negatively very effective	1	4.76
Total	21	100

In Table 6, the views of pre-service teachers participating in the research on the impact of online education on their creative potential are categorised. 28.57% of the pre-service teachers responded that it was very effective, 52.39% responded that it was effective, 9.52% responded that it was ineffective, and 4.76% responded that it was both ineffective and very ineffective. Among the teacher candidates participating in the research, no teacher stated that online education has a positive effect on creative potential.

In Table 7, the evaluations of the pre-service teachers who participated in the research regarding the advantages of online education that facilitate the development of smart education are provided.

Table 7. Pre-service teachers' evaluations of the advantages of online education that enable the development of smart education

Category	F	%
Strengthens education options with technology	14	66.67
Reinforces the rich content shown in the lesson with the recording option	16	76.19
A more logical and convenient course environment is provided	6	28.57
Transfers intelligence-enhancing features to students	3	14.29
Makes you like the lesson and increases the opportunity to participate	2	9.52
Makes the use of time functional	2	9.52

In Table 7, the evaluations of the pre-service teachers participating in the research are categorised based on the advantages of online education that enable the development of smart education. 66.67% of the teachers answered that technology enhances education options. Additionally, 76.19% of them stated that it strengthens the rich content displayed in the course through the registration option. Furthermore, 28.57% of the teachers responded that technology provides a more logical and convenient course environment. 14.29% of the pre-service teachers reported that they communicate intelligence-enhancing characteristics to their students and ensure that these habits are reviewed. Additionally, 9.52% of them strive to make the lessons engaging, increase the likelihood of student participation, and make efficient use of time.

In Table 8, the evaluations of the pre-service teachers regarding the obstacles that hinder the development of online education with smart education are provided.

Table 8. Pre-service teachers' evaluations on the disadvantages of online education that prevent the development of smart education

Category	F	%
Reduces effective communication	14	66.67
The classroom environment increases the sense of longing	12	57.14
Decreases social communication	9	42.86
Reduces the sense of control in the classroom	7	33.33
Restricts development	4	19.05
Lowers the level of transparency	2	9.52

In Table 8, the evaluations of the pre-service teachers participating in the research regarding the disadvantages that hinder the development of online education with smart education are categorised. It was observed that 66.67% of the pre-service teachers stated that it reduces effective communication, 57.14% of them mentioned that the classroom environment increases the feeling of longing, and 42.86% of them reported that it reduces social communication. 33.33% of the pre-service teachers answered that it reduces the sense of control in the classroom, 19.05% of them reported that it restricts development, and 9.52% of them stated that it reduces the level of transparency.

4   DISCUSSION

It has been determined that the pre-service teachers participating in the research exhibit a high degree of potential for creativity, based on the statistical values obtained from the data collection tool. Nafasova and Abdullayeva [32] aimed to enhance the logical competencies of physics teachers through the use of smart education technologies in their study, which was conducted and published in 2023. As a result of the research, it is evident that the use of smart education technologies has significantly improved the development of logical competence in a didactic manner. As a result of the research, it is evident that teacher candidates have a tendency to use smart education. Considering the educational opportunities in the age of information technology, Tran and Tran [33] stated that smart education is a new concept, especially in developed countries worldwide. They planned to conduct research on this topic. When examining the results of the research, it has been concluded that smart education is increasingly popular among students. Furthermore, it is a suitable method for implementing and evaluating smart education programmes. When examining the results of the research, it is evident that every perspective on smart education and creative potential holds significance. It has been concluded that students consistently achieve success with the use of this technology.

The aim of this study was to propose the Intelligent Equation Exam System (SEED), a digital assessment tool designed to replace traditional multiple-choice and paper and pencil exams. In the conclusion of the research, it is evident that the participants involved in the study have a favourable perception of SEED in comparison to traditional exams. They have also concluded that SEED provides effective solutions, particularly for students who struggle with handwriting difficulties. Considering the research findings, it is evident that the creativity potential of teacher candidates can be enhanced by incorporating various teaching methods in smart education. Li and Wong [34] aimed to provide a comprehensive review of the current state and trends of research on smart education in their study. As a result, it is evident that research on smart education has been extensively published in various sources. It has been concluded that smart technologies should be widely utilised for research, teaching, and learning in the field of smart education. In this context, when this value is combined with the research results, it is observed that there is no significant difference and the outcomes are favourable when the gender variation in smart education is controlled.

In the study conducted by Karashash et al. [35], the main objective was to assess the development of meta-competence among university students through the use of innovative technologies. In the results section of the research, it was stated that the use of innovative education with the blended learning method enables students to better understand the lesson. Additionally, innovative education was found to foster

a stronger connection between students and their teachers. When examining the information obtained from this research and the data within the study, it is evident that the environmental results are favourable. It is believed that each of the studies mentioned in the discussion section contributes to the education of students in terms of knowledge, meaning, and skills in literature. It is believed that this study will contribute to the existing literature by fulfilling the same objective.

5   CONCLUSION

As a result of the comprehensive study, it was observed that the teacher candidates had high levels of smart education and creative potential. However, it was concluded that the gender variable had no effect. In addition, it was determined that the creativity and intelligence scores of the students in the third and fourth-grade groups were higher compared to the prospective teachers' class variables. The vast majority of future teachers stated that online education does not have any effect on quality education. The majority of teachers state that online education offers several advantages, such as the opportunity to combine technology with professional knowledge, enabling the use of talents, and encouraging the development of different methods. These advantages facilitate the development of professional creativity.

Among the qualitative perspectives of the pre-service teachers, it is stated that technology enhances educational options, enriches course content through recording capabilities, creates a more logical and convenient learning environment, transfers its intelligence-enhancing features to students, fosters a love for learning, increases opportunities for participation, and improves time management. Among the disadvantages, they stated that it reduces effective communication, increases the longing for the classroom environment, decreases social interaction, and diminishes the sense of control in the classroom.

As a main conclusion, smart education is effective in enhancing learning by creating an interactive learning environment for learners in all aspects.

6   RECOMMENDATION

It is known that teachers strive to improve themselves every day and make way for new ones. For a more intelligent society, we need a greater number of highly qualified and well-equipped teachers. Furthermore, the teachers of the future should possess these same qualities. To enhance the level of intelligent education and foster creativity among future teachers, it is highly recommended that these skills be transferred to their students in the early years of their education. This approach is considered one of the most significant expectations and suggestions of the research. In addition, future research education programmes should include educational content aimed at addressing the drawbacks of online education compared to smart education.

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