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Evaluating the Effectiveness of the Shad Virtual Learning Platform: Perspectives of Elementary School Teachers and Students in Kurdistan Province

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Abstract

This study aimed to evaluate the effectiveness of the Shad virtual learning platform, a key tool for distance education during the COVID-19 pandemic, from the perspectives of elementary school teachers and students in Kurdistan Province during the 2023 academic year. Employing a descriptive survey design, the research investigated the viewpoints of teachers and students regarding six critical components of Shad's effectiveness: content delivery, teacher-student interaction, student participation, assessment, monitoring, and feedback. The study population comprised all elementary school teachers and students in Kurdistan Province, from which a sample of 155 teachers and 235 students were selected using a multi-stage cluster sampling method. Data were collected through two researcher-developed questionnaires with a five-point Likert scale and analyzed using descriptive statistics, one-sample t-tests, and Mann-Whitney U tests in SPSS version 26. The content validity of the questionnaires was confirmed by expert opinions, and the reliability was established using Cronbach's alpha (0.81 for teachers and 0.87 for students). The findings revealed that both groups rated Shad as moderately effective in content delivery and feedback provision while perceiving lower effectiveness in other components. Student mean scores were 3.41 for content delivery and 3.79 for feedback, whereas teacher mean scores were 3.11 for content delivery, 2.91 for interaction, and 3.78 for feedback. Significant differences were observed between the two groups' views on content delivery, interaction, and monitoring ($p < 0.05$). Feedback and student participation were deemed the most important, while monitoring, assessment, and direct interaction were considered less significant. This study highlights the challenges Shad faces in interaction and participation, suggesting a need for revision and improvement.

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Introduction

The COVID-19 pandemic, a global crisis of unprecedented scale, presented profound challenges to educational systems worldwide. The abrupt disruption of traditional classroom-based instruction, coupled with widespread school closures, underscored the imperative for innovative educational technologies (Han et al., 2020). In this context, virtual learning platforms emerged as a critical mechanism for ensuring the continuity of teaching and learning (Li & Lalani, 2020). In Iran, the official virtual education system, the Shad platform, played a pivotal role in delivering educational services to students during this critical period. Launched in 2020 at the height of the pandemic, Shad was designed to facilitate connectivity between students and teachers and to deliver educational content within a virtual environment. Recent scholarly investigations have consistently emphasized the platform's significance in sustaining educational provision amidst crisis (Azizi & Hosseininezhad, 2022; Rahimi et al., 2021; Yazdani & Bahrami, 2022; Hosseini & Ghorbani, 2023; Hosseini, 2023).

While the importance of the Shad platform is evident, a rigorous scientific evaluation of its effectiveness in achieving educational objectives, particularly within the formative years of elementary education, is essential. Moreover, prior research concerning the efficacy of social media and virtual platforms within formal educational settings has been comparatively limited. According to a report by the Iranian Ministry of Education (2022), the Shad platform successfully provided coverage for over 14 million students and teachers during the peak of the pandemic, thereby solidifying its position as a primary tool for virtual education within the nation. Nevertheless, significant challenges persist with respect to internet accessibility, the availability of electronic devices, and digital literacy, particularly within rural and underserved regions. Concurrently, teachers have encountered difficulties in adapting to the platform and effectively utilizing its features (Mohammadi, 2023). For instance, numerous educators have lacked the requisite skills to effectively employ virtual tools and design engaging educational content within the Shad environment. This has, in turn, impacted the overall quality of virtual instruction. Consequently, this study, focusing on elementary schools within Kurdistan Province, investigates the effectiveness of the Shad platform from the perspectives of both teachers and students. The primary objective is to identify the strengths and weaknesses of Shad and to propose strategies for enhancing the quality of virtual education, in alignment with Iran's educational policies and the 2024 vision. This research endeavors to address the existing gap in the literature concerning the evaluation of educational platform effectiveness within specific regional contexts with a focus on stakeholder perspectives.

This research draws upon the theoretical frameworks of constructivist learning theory (Piaget, 1954; Vygotsky, 1978), emphasizing active learning and social interaction, and social learning theory (Bandura, 1977), highlighting the role of observation and modeling, to frame the data analysis. Furthermore, the concepts of educational equity, blended learning, and cognitive load theory are employed to provide a comprehensive understanding of the virtual learning environment. Virtual education evaluation models, such as Kirkpatrick's model (Rezaei, 2023), the Technology Acceptance Model (Jameson, 2019), and the TPACK framework (Tunjera & Chigona, 2019), are utilized to assess the effectiveness of Shad and teacher competency. Consequently, the role of educational leaders in enhancing virtual education through appropriate policies and equitable access is emphasized. The findings of this study have the potential to assist school administrators in improving educational processes, quality, teacher development, and school management (Bathon et al., 2018; González et al., 2021; et al & Lalani, 2020; Karimi, 2023), thereby providing practical insights for enhancing virtual learning experiences.

Ultimately, the evaluation of Shad's effectiveness within elementary education is crucial for enhancing the quality of virtual education, teacher development, student learning, and educational policy. With this in mind, the central question of this study is, "To what extent is the Shad platform effective in elementary education from the perspectives of teachers and students in Kurdistan Province?" The subsidiary questions are: "Is Shad effective in delivering educational content, facilitating communication, promoting student engagement, assessing learning, and providing feedback from students' perspectives? Is Shad effective in delivering educational content, facilitating communication, promoting student engagement, assessing learning, and providing feedback from teachers' perspectives? What are the differences in teachers' and students' views on Shad's effectiveness? How do teachers and students prioritize the components of Shad's effectiveness?"

Methodology

This research adopts a quantitative approach with a practical aim, employing a descriptive survey strategy to describe educational phenomena

accurately. Data collection and analysis were conducted to explore participants' perspectives and identify the status and differences in students' and teachers' views regarding the effectiveness of Shad, a virtual social network-based educational platform.

Data were collected using two researcher-developed questionnaires, one for teachers and one for students. These questionnaires assessed Shad's effectiveness across six key components: 1) educational content delivery, 2) teacher-student communication and interaction, 3) student participation in the teaching-learning process, 4) student learning assessment, 5) teacher performance monitoring, and 6) assignment and feedback provision. These components were determined through a comprehensive review of the educational technology literature and were grounded in the study's theoretical frameworks, particularly constructivist (Piaget, 1954; Vygotsky, 1978) and social learning theories (Bandura, 1977). The questionnaires consisted of closed-ended questions using a five-point Likert scale, along with demographic information. Both the teacher and student questionnaires included 22 items, each corresponding to one of the six aforementioned components.

The study population comprised all elementary school teachers and students in Kurdistan Province during the 2023 academic year. Given the large population size, regional variations (16 educational regions), and the need for generalizability, a multi-stage cluster sampling method was employed. In the first stage, elementary schools were randomly selected from each educational region, proportional to the student population. In the second stage, classrooms were randomly selected from each selected school. Finally, all teachers and students in the selected classrooms were included in the study sample. This sampling method was chosen due to the well-defined size and identity of the study population and the ability to obtain a representative sample. The sample size was determined using Cochran's (1977) sample size formula, resulting in 155 teachers and 235 students.

To ensure the suitability of the questionnaire for elementary students, items were designed to be simple and comprehensible. During the pilot study with 50 students, guidance was provided to address any uncertainties. Additionally, a five-point Likert scale was used to facilitate ease of response and minimize potential errors.

Data analysis was conducted at both descriptive and inferential levels. Descriptive statistics (frequency, mean, standard deviation) were used to interpret the findings. The Kolmogorov-Smirnov test was employed to determine data distribution for hypothesis testing. A one-sample t-test was used to examine means; however, due to non-normal data distribution, the Mann-Whitney U test was also utilized. All analyses were performed using SPSS version 26.

The reliability and validity of the questionnaires were assessed. Internal consistency and Cronbach's

alpha coefficient were used to measure reliability. A pilot study with 50 participants from each group further evaluated reliability and validity, confirming the questionnaire's appropriateness. Content validity was enhanced through reviews by five experts in educational management, and the final questionnaire was prepared following minor revisions. Cronbach's alpha was 0.81 for the teacher questionnaire and 0.87 for the student questionnaire, indicating acceptable reliability. The reliability for the six components ranged from 0.70 to 0.80.

Results

Analysis of teacher and student responses revealed that the highest mean score (3.11) with a standard deviation of 1.10 was attributed to the component «Assessment of Student Learning». Conversely, the lowest mean score (2.49) and standard deviation of 1.13 was associated with “Establishing Communication between Teacher and Student.” The “Providing Assignments and Feedback” component had a mean score of 2.96 and a standard deviation of 1.21. Table 1 summarizes the mean scores and standard deviations across all components.

Table 1: Mean Scores and Standard Deviations for Effectiveness Components of SHAD-Based Education

Component	Mean	Standard Deviation
Content Delivery	2.61	1.17
Teacher-Student Communication	2.49	1.13
Student Participation in Teaching-Learning Process	2.77	1.17
Assessment of Student Learning	3.11	1.10
Teacher Performance Monitoring	3.03	1.12
Assignment and Feedback Provision	2.96	1.21

Normality testing was conducted using skewness and kurtosis values, and the Kolmogorov-Smirnov test. The Kolmogorov-Smirnov test (results not shown) indicated that the data was not normally distributed ($p<0.05$). Consequently, given the significance levels obtained, non-parametric statistical methods, such as the Mann-Whitney U test, were employed for subsequent analyses, as previously discussed in the Methodology section.

Table 2: Normality Test of the Effectiveness Components of the Shad Network

No.	Construct	Kolmogorov-Smirnov Statistic for Teachers	Significance Level for Teachers	Kolmogorov-Smirnov Statistic for Students	Significance Level for Students
1	Transfer of Educational Content	0.122	<0.001	0.154	<0.001
2	Establishing Communication Between Teacher and Student	0.107	<0.001	0.111	<0.001
3	Student Participation in the Teaching-Learning Process	0.146	<0.001	0.145	<0.001
4	Assessment of Student Learning	0.117	<0.001	0.105	<0.001
5	Monitoring Teacher Performance	0.094	<0.001	0.110	<0.001
6	Providing Assignments and Feedback	0.151	<0.001	0.172	<0.001

To assess the effectiveness of the Shad platform from students' perspectives in terms of content delivery, teacher-student interaction, student participation, assessment, teacher supervision, and assignment submission and feedback, a one-sample t-test was conducted. Results from Table 3 indicate that, with a 95% confidence level, the sample means differed significantly from the hypothesized population mean (reference value). Furthermore, given that the sample means (except for content delivery and assignment submission and feedback) were lower than the population mean, it can be concluded that the effectiveness of virtual learning through the Shad platform was, in most cases, below average. In other words, apart from the two components of content delivery (mean of 3.41) and assignment submission and feedback (mean of 3.79), which had mean scores slightly above average, the other components had below-average mean scores. These results suggest that, according to students, the Shad platform was less effective in facilitating student

participation, assessment, teacher supervision, and teacher-student interaction.

Table 3: Results of a One-Sample t-test to Assess the Effectiveness of the Shad Platform from Students' Perspectives

Component	Sample Mean	Standard Deviation	t-value	Degrees of Freedom	Significance Level	Reference Value	Sample Size
Content Delivery	3.41	1.105	62.380	11	0.005	3	235
Teacher-Student Interaction	2.24	0.847	75.832	847	0.006	3	235
Student Participation in Teaching-Learning Process	2.20	0.8307	83.070	816	12	235	3
Student Assessment	2.65	0.873	65.522	37	0.016	3	235
Teacher Performance Supervision	2.48	0.807	35.288	852	0.048	3	235
Assignment Submission and Feedback	3.79	1.147	47.099	1147	0.054	3	235

To assess the effectiveness of the Shad platform from teachers' perspectives in terms of content delivery, teacher-student interaction, student participation in the teaching-learning process, student assessment, teacher performance supervision, and assignment submission and feedback, a one-sample t-test was conducted. The results in Table 4, based on t-test values and significance levels at a 95% confidence level, indicate that the sample means differ significantly from the hypothesized population mean (reference value). Furthermore, given that the sample means are generally lower than the population mean, it can be concluded that the effectiveness of virtual learning through the Shad platform is, in most cases, below average. In other words, while the platform's effectiveness in content delivery (mean of 11.34), teacher-student interaction (mean of 11.29), and assignment submission and feedback (mean of 8.78) is close to the reference value, indicating a moderate level of effectiveness according to elementary school teachers in Kurdistan Province, the overall effectiveness of the Shad platform in the research components is unsatisfactory."

Table 4: Results of a One-Sample t-test to Assess the Effectiveness of the Shad Platform from Teachers' Perspectives eadability:

Component	Sample Size	Reference Value	Mean	t-value	Significance Level	Standard Deviation
Content Delivery	155	12	11.34	62.380	0.052	2.26
Teacher-Student Interaction	155	12	11.29	75.832	0.072	2.61
Student Participation	155	12	8.53	83.070	0.180	2.35
Student Assessment	155	9	7.97	65.522	0.007	2.47
Teacher Performance Supervision	155	12	8.27	35.288	0.053	2.49
Assignment Submission and Feedback	155	9	8.78	47.099	0.001	2.84

distribution in both groups. Therefore, the Mann-Whitney U test should be used to compare the two groups. As shown in Table 5, the results of the Mann-Whitney U test indicate that there is a statistically significant difference between the scores of teachers and students on three components: content delivery, teacher-student interaction, and teacher performance supervision. However, in other components, since the p-values are greater than 0.05, the observed differences between the opinions of students and teachers are not statistically significant at a 95% confidence level in the sub-scales of student participation in the teaching-learning process, student assessment, and assignment submission and feedback. This may be due to chance or error.

Table 5: Mann-Whitney U Test for Components

Rank	Construct	Mann-Whitney U	Z-statistic	Significance Level
1	Content Delivery	-٦/٩٤٤	<0.001	
2	Teacher-Student Interaction	-٢/١٧٦	0.030	
3	Student Participation	-٠/١٥٤	0.878	
4	Student Assessment	-٠/٢١٠	0.833	
5	Teacher Performance Supervision	-٣/٠٧٥	0.002	
6	Assignment Submission and Feedback	-٠/١٠١	0.919	

A Friedman test was conducted to prioritize the components of the effectiveness of virtual education through the Shad network. Table 6 shows the significance of the Friedman test. The calculated chi-square value is 427.682, which is significant at a level of less than 0.001. The significance of the Friedman test means that the ranking of the components of the effectiveness of education through the Shad network is meaningful and different among the respondents, and comparisons can be made between the ranking factors.

Table 6: Results of the Friedman Test for Ranking the Effectiveness Components of the Shad Network from the Perspective of Students and Teachers

Calculated Chi-Square	Degrees of Freedom	Significance Level	Test Result
٤٢٧/٦٨٢	5	0.000	Null Hypothesis Rejected

Table 7: Results of the Friedman Test for Ranking the Effectiveness Components of the Shad Network from the Perspective of Students and Teacher

Component	Mean Rank	Rank	Mean
Assignment Submission and Feedback	۴/۵۶	First	۳/۷۴
Student Participation	۳/۵۰	Second	۴/۳۷
Content Delivery	۳/۴۷	Third	۴/۳۳
Teacher Performance Supervision	۳/۴۴	Fourth	۲/۷۵
Student Assessment	۳/۴۲	Fifth	۳/۹۴
Teacher-Student Interaction	۲/۲۱	Sixth	۳/۹۷

Table 6 shows the results of the Friedman test for prioritizing the components of the effectiveness of the Shad network from the perspective of students and teachers. It can be observed that providing assignments and feedback to students, as well as student participation in the teaching-learning process,

are the most important components of the effectiveness of education through the Shad network. Following these, content delivery, teacher performance supervision, student assessment, and teacher-student interaction are ranked third to sixth, respectively.

Discussion and Conclusion

This study aimed to investigate the effectiveness of the Shad platform in primary education in Kurdistan Province. The results indicated that both students and teachers rated the effectiveness of Shad as moderate in some components and lower in others. Specifically, students rated Shad's effectiveness as moderate in educational content delivery, assignment provision, and feedback, while rating it lower in other components such as participation, assessment, monitoring, and communication. Teachers also rated Shad as moderately effective in content delivery, communication, and assignment and feedback provision but rated it lower in other components.

These findings are consistent with some previous studies. For example, Malkipour (2020) found that students perceive assessment in virtual education as suboptimal. Moradi and Zarghami (2021) also pointed out weaknesses in Shad regarding teaching and content delivery. However, some studies have shown different results. For instance, Haj Abu Talebi (2021) indicated SHAD's effectiveness from students' perspectives. These differences may stem from variations in the study population and research conditions.

A novel finding of this study is the significant difference between teachers' and students' views on Shad's effectiveness in content delivery, communication, and monitoring. This difference suggests that teachers and students have varying experiences with virtual education on SHAD. Teachers appear to have a more positive view of Shad's effectiveness in certain components, possibly due to their greater familiarity with Shad's features.

The study's findings reveal that virtual education on Shad faces challenges. Lack of two-way interaction, one-way content delivery, and teachers' lack of digital literacy are among these challenges. The prioritization of components showed that from students' and teachers' perspectives**, assignment and feedback provision are at the top, followed by student participation, content delivery, teacher performance monitoring, assessment, and communication.** This indicates that **assignment and feedback provision and student participation are the most critical components of SHAD's effectiveness** from their perspectives**.**

Recommendations Based on Study Findings:

Based on the study findings, it is recommended that:

- Educational planners and designers revise and redesign Shad, focusing on two-way interaction and engaging content delivery.
- Teachers and students are encouraged to produce high-quality, creative educational content.
- In-service training courses on Shad's features and digital literacy are provided for teachers.
- A mechanism for monitoring teacher performance in the virtual space and providing appropriate feedback is designed.
- More opportunities for student participation in learning activities on Shad are provided.

Limitations and Suggestions for Future Research:

One limitation of this study was accessing primary school students and ensuring their honest cooperation. To mitigate this, motivational tools were used, and students responded in a friendly environment. Nevertheless, for future research, it is suggested that:

- The study is conducted on a larger scale and nationwide to validate the results.
- Qualitative methods are used to explore students' and teachers' experiences in depth.
- The impact of background variables such as parental education and internet access on Shad's effectiveness is examined.
- Future studies investigate the impact of in-service training on teachers' performance on Shad.
- Future studies examine the impact of active teaching methods on student participation on Shad.

Significance and Implications:

The findings of this study will be **useful for** the Ministry of Education in virtual education policymaking, the Kurdistan Province Education Organization in regional planning, students and

parents in optimizing Shad usage, teachers in improving virtual teaching methods, curriculum planners in designing appropriate content for Shad, education policymakers in evidence-based decision-making, researchers in virtual education, Shad developers in enhancing the platform, and school administrators in planning and implementing effective virtual education. This study can contribute to improving virtual education quality in Iran and promoting educational equity

References

Abbaspour, N. (2021). Virtual education: Another look at the link between home and school. *Link Magazine, 42*(4).

Aguilar, J. M., & Mendez, L. (2013). Online learning and social media: Emerging trends and consequences. *International Journal of Educational Research, 60*, 1-12.

Aguilar, M. A. del Mar Saldaña, M., & Aguilar, F. J. (2013). Assessing geometric accuracy of the orthorectification process from GeoEye-1 and WorldView-2 panchromatic images. *International Journal of Applied Earth Observation and Geoinformation, 21*, 427-435.

Ahmadi, A. (2023). Parental role in supporting students' virtual learning. *Journal of Educational Technology, 15*(2), 112-125.

Alavi, F., & Ghaffari, H. (2020). Virtual learning platforms in Iran: The case of Shad. *International Review of Education, 26*(4), 215-230.

Azimi, F., Sadeghi, M., & Khoshbakht, M. (2022). The future of education: Opportunities and challenges of virtual platforms in Iran. *Educational Technology Research and Development, 70*(2), 387-403.

Azizi, A., & Hosseininezhad, M. (2022). Opportunities and challenges of virtual education during the COVID-19 pandemic. *Journal of Educational Sciences, 18*(1), 45-60.

Azizi, S., & Hosseini-nejad, A. (2022). Opportunities and challenges of virtual education during the COVID-19 pandemic: A phenomenological study. *Journal of Educational Psychology, 18*(1), 45-60.

Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.

Bates, T. (n.d.). *Teaching in a digital age: Guidelines for designing teaching and learning*. BCcampus Open Education.

Bathon, J., Burkhardt, J. M., & Mandinach, E. B. (2018). Teacher data literacy: Integrating data-driven decision making into classroom practice. *Journal of Teacher Education, 69*(1), 85-102.

Bozkurt, A., & Sharma, R. C. (2020). Emergency remote teaching in a time of global crisis due to CoronaVirus pandemic. *Educational Technology Research and Development, 68*, 1035–1040.

Cai, R., & Wang, Q. (2020). A six-step online teaching method based on protocol-guided learning during the COVID-19 epidemic: A case in Henan province, China.

Charles, E., & Warburton, E. (2012). The role of social media in higher education: A review of the literature. *Education and Information Technologies, 17*(1), 107-124.

Coelho, A., & Duarte, A. (2016). Leveraging technology in education: The promise of e-learning and open education. *Computers in Human Behavior, 59*, 447-455.

Coelho, J., & Duarte, C. (2016). A literature survey on older adults' use of social network services and social applications. *Computers in Human Behavior, 58*, 187-205.

Dervishzadeh, S. (2022). The effectiveness of virtual space (Shad program) in the learning rate of students. *National Humanities Professional Research Conference, 2*(6), 6-12.

Document on fundamental transformation of education and training. (2012/2014). Ministry of Education, Iran.

Elhiari, F., & Jahangiri, G. (2022). The effectiveness of virtual education (Shad program) in the level of students' learning. *National Scientific Research Conference, 3*(6), 10-19.

Gadami, A., & Khushtarash, E. (2013). Challenges and opportunities for educational improvement: Social media and its contemporary classroom implications. *Learning and Individual Differences, 26*, 1-10.

Ghaed Amini, M., Mohammadi, H., & Yaghoubzadeh, M. (2021). Evaluation of the effectiveness of virtual education during the COVID-19 pandemic: A case study of elementary school students in Chaharmahal and Bakhtiari province. *Journal of Educational Technology, 28*(3), 45-56.

González, M. A., Gómez, M. V., & Airabella, G. (2021). Professional development of teachers in the use of educational technologies. *Education and Information Technologies, 26*(6), 7253-7271.

Haj Abu Taleb, M. (2021). Evaluating the effectiveness of virtual education during the COVID-19 pandemic from the perspective of students: A case study in Tehran. *Journal of Educational Research, 12*(2), 120-134.

Haj Abu Talebi, A. (2021). Students' Perspectives on SHAD Platform Effectiveness. *Journal of Educational Technology, 9*(3), 187-202.

Haji, J., Mohammadi Mehr, M., & Mohammad Azar, H. (2022). Representing the problems of education in the virtual space using the Shad program during the corona pandemic period: A phenomenological study. *Technology Quarterly of Studies and Communication in Educational Sciences, 11*(3), 117-153.

Han, F., Liu, Y., & Chen, Y. (2020). Education disruption during COVID-19: The learnings and implications. *Education Sciences, 10*(11), 317.

Han, Y., Cao, X., & Wang, Y. (2020). COVID-19 and online education in China: challenges and coping strategies. *Public Health, 189*, 16-17.

Heydari, S. S. (2021). Increasing the effectiveness of virtual teaching of experimental sciences in the era of Corona. *National Conference on Curriculum Studies in the Third Millennium, Kerman*.

Hejbari Nejad, S. (2020). Comparing the effectiveness of teaching through the Shad software and teaching through television on the learning of 10th grade students in mathematics. *Humanities and Management Conference, 3*(9), 10-26.

Hosseini, A. (2023). Challenges and Opportunities of Virtual Education in Iran. *Iranian Journal of Educational Research, 12*(3), 201-215.

Hosseini, M., & Ghorbani, F. (2023). A study on the impacts of COVID-19 on educational outcomes: A focus on the Shad platform. *Journal of Educational Policy Analysis, 29*(1), 90-105.

Hosseini, R., & Ghorbani, S. (2023). Evaluation of SHAD Platform from Teachers' Perspectives. *Journal of Virtual Learning, 9*(4), 320-335.

Iranian Ministry of Education. (n.d.). *Fundamental Transformation Document on Education*.

Jameson, A. (2019). Developing critical and theoretical approaches to educational technology research and practice. *British Journal of Educational Technology, 67*(5), 1101-1118.

Joti, P., & Kumar, R. (2017). Virtual university in the new era: A review. *International Journal of Education and Management, 31*(4), 12-20.

Karimi, L. (2023). Leadership and Management in Virtual Education. *Journal of Educational Leadership, 14*(1), 67-80.

Kaur, A., & Singh, S. (2016). New technologies in education: A review of social media's influence. *Technology, Pedagogy and Education

Kaur, M., & Singh, S. (2016). Analyzing negative ties in social networks: A survey. *Egyptian Informatics Journal, 17*(1), 21-43.

Khademi, M., Zarei, M., & Mohammadi, R. (2022). The impact of Shad on remote education in Iran: A longitudinal study. *Iranian Journal of Educational Research, 10*(1), 78-90.

Khojasth, S. (2022). The effectiveness of virtual education using the Shad system on students' progress motivation and time management during the Corona epidemic. *Technology and Research Quarterly in Education and Training, 5*(3), 21-34.

Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge? *Contemporary Issues in Technology and Teacher Education, 9*(1), 60-70.

Li, C., & Lalani, F. (2020). Digital education: The challenges and opportunities of the COVID-19 pandemic. *International Journal of Education and Development using Information and Communication Technology, 16*(1), 1-7.

Li, C., & Lalani, F. (2020). The COVID-19 pandemic has changed education forever. This is how. *World Economic Forum*.

Malekipour, A. (2020). Effectiveness of e-curriculum in social networks during the COVID-19 pandemic: Parents', teachers' and students' perspectives. *Interdisciplinary Journal of Virtual Learning in Medical Sciences, 11*(4), 207-214.

Malkipour, M. (2020). Evaluation of Virtual Education in Primary Schools. *Journal of Educational Assessment, 15*(4), 234-249.

Marbán, J. M., Radwan, E., Radwan, A., & Radwan, W. (2021). Primary and secondary

students' usage of digital platforms for mathematics learning during the COVID-19 outbreak: The case of the Gaza Strip. *Mathematics, 9*(2), 110.

Miguel, A., Fontes, L., Antunes, F., Neves, D., & Martins, D. (2004). Anthocyanin concentration of "Assaria" pomegranate fruits during different cold storage conditions. *Journal of Biomedicine and Biotechnology, 2004*(5), 338.

Miguel, A., Ramos, J., & Cueto, H. (2004). Technology-enhanced learning: A key driver for student engagement. *Computers & Education, 43*(3), 305-320.

Ministry of Education. (2022). *Report on Virtual Education Challenges in Rural Areas*. Tehran: Ministry of Education Publications.

Mohammadi, A. (2023). Teachers' Challenges in Using the SHAD Platform. *Educational Technology Quarterly, 11*(2), 89-102.

Mohammadi, B. (2023). Digital literacy and teacher competency in virtual education. *Journal of Digital Learning, 11*(2), 89-102.

Moradi, R., & Zarghami, S. (2021). Challenges of Virtual Education on SHAD. *Journal of Virtual Learning, 8*(2), 112-127.

Mousavi, S., & Niazi, S. (2021). Cultural considerations in the implementation of digital platforms for education in Iran. *Iranian Educational Review, 19*(2), 99-115.

Musaibi Ardakani, M., Rezapour Mirsaleh, Y., & Behjati Ardakani, F. (2022). Problems and challenges of virtual education during the outbreak of the coronavirus in elementary school. *Research Education, 7*(27), 65-79.

Piaget, J. (1954). *The construction of reality in the child*. New York: Basic Books.

Rahimi, A., Sadeghi, M., & Khoshbakht, M. (2021). Assessing the effectiveness of virtual learning during the COVID-19 pandemic: A case study of the Shad platform. *Iranian Journal of Educational Studies, 12*(1), 23-42.

Rahimi, M., Rezaei, A., & Davari, H. (2021). Students' Experiences with SHAD Platform. *Journal of Educational Psychology, 8*(2), 120-135.

Rahmani, M., & Hashemi, H. (2020). The role of digital platforms in modern education: A case study of Shad in Iran. *Educational Technology Journal, 15*(2), 45-56.

Rasouli, A. (2017). The role of online education in modern learning environments. *E-Learning and Digital Media, 14*(4), 215-226.

Rezaei, M. (2023). Evaluating the Effectiveness of Virtual Training Using the Kirkpatrick Model. *Journal of Electronic Learning Studies, 16*(1), 56-70.

Rezaei, S. (2023). Evaluation Models in Virtual Education. *Journal of Educational Measurement, 16*(1), 56-70.

Sadat, S., & Mirzaei, M. (2021). Challenges and opportunities of virtual learning: Insights from the Shad platform. *Journal of Educational Policy, 24*(3), 112-130.

Saravani, E. & Rahimpour, M. (2021). Evaluating the effectiveness of virtual education in the era of Corona with an emphasis on the views of primary teachers of the 1st and 2nd districts of Zahedan city. *The First National Conference of Cognitive Science and Education, Shiraz*.

Saravani, S., & Rahimpoor, M. (2021). Evaluation of the effectiveness of virtual education during the COVID-19 pandemic: A case study of elementary school teachers in Zahedan. *Journal of Educational Studies, 15*(3), 212-232.

Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science, 12*, 257–285.

Talidong, K. J. B., & Toquero, C. M. D. (2021). Facing COVID-19 through emergency online education anchored in Khan's framework: Case of Philippine teachers in Xi'an, China. *European Journal of Interactive Multimedia and Education, 2*(1), e02104.

Tunjera, N., & Chigona, A. (2019). Investigating TPACK development through a technology integration professional development programme for teachers in disadvantaged schools. *Education and Information Technologies, 24*(1), 173-191.

Tunjera, N., & Chigona, A. (2019). Teacher Educators' Appropriation of TPACK-SAMR Models for 21st Century Pre-Service Teacher Preparation. *International Journal of Information and Communication Technology Education*.

Vahdani, M. (2021). Home club: The role of various elements in physical education virtual education. *Elementary Education Growth Magazine, 24*(5), 75-89.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

Wankel, C., & Blessinger, P. (2011). Developmental perspectives on student engagement in active learning. *Higher Education, 61*(5), 553-557.

Xia, J. (2020). Practical exploration of school-family cooperative education during the COVID-19 epidemic: A case study of Zhenjiang experimental school in Jiangsu province, China. *Best Evidence of Chinese Education, 4*(2), 521-528.

Yazdani, A., & Bahrami, K. (2022). SHAD Platform and Educational Continuity. *Journal of Educational Innovations, 11*(1), 78-92.

Yazdani, M., & Bahrami, S. (2022). Challenges and opportunities of remote education in Iran during the COVID-19 crisis. *Iranian Journal of Educational Sociology, 6*(2), 35-51.

Zhang, W. et al. (2020). Suspending classes without stopping learning: China's education emergency management policy in the COVID-19 breakout. *Journal of Risk and

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