



RESEARCH ARTICLE

Teaching Performance of Arabic Language Teachers at the Intermediate Stage in Light of Information Technology, Media and Communication Skills

Mahmoud Hela Abdel Baset Abdel Qader

Department of Teaching and Learning, College of Education, King Khalid University

ARTICLE INFO	ABSTRACT
Received: Sep 4, 2024 Accepted: Nov 21, 2024	The aim of the current research is to reveal the level of teaching performance of Arabic language teachers at the intermediate stage in light of information technology, media and communication skills; To achieve this goal, study materials and tools were prepared, which were: A list of teaching practices required for Arabic language teachers at the intermediate stage in light of information technology, media and communication skills, and a questionnaire to measure those practices, then verify the validity and reliability of the questionnaire, then select the study sample from Arabic language teachers at the intermediate stage, then apply the study tool, then statistical analysis and interpretation of the results and provide recommendations and suggestions. The results showed: The level of teaching performance of Arabic language teachers at the intermediate stage in light of information technology, media and communication skills is low; The overall average of teaching performance was (84.13), at a rate of (46.74), and the research presented some recommendations, including: Developing the teaching performance of Arabic language teachers in light of information technology, media and communication skills.
<p>Keywords</p> <p>Teaching performance Teachers Information technology and media skills Intermediate stage</p> <p>*Corresponding Author:</p>	

INTRODUCTION

The 21st century skills are an important and necessary requirement in curricula at various educational levels; because they include diverse, comprehensive and useful skills for the learner; as they are related to the era in which we live; therefore, people need them in their lives and their life interactions with each other. Those who do not possess these skills may not be able to adapt to society, or achieve success in many areas.

One of the important things in the teaching process is to link the teaching practices that teachers perform in their teaching with the skills required by the era in which students live, including 21st century skills; so that this contributes to their development in their students, and so that their teaching keeps pace with the requirements of the era, and meets the needs of society, and students are able to achieve the desired goals, and are able to adapt, communicate, interact and achieve.

Teaching skills are essential skills for teachers; which requires the importance of evaluating and developing their teaching practices in a way that contributes to achieving the educational goals that prepare the learner for life; the twenty-first century witnessed a huge boom in scientific and technical developments related to the field of education that directly affected the elements of the education system at all levels, and this was linked to the necessity of developing teaching practices in a way that is consistent with the skills of the twenty-first century (Al-Ruwais, 2020).

Teaching the language and developing its various skills requires the teacher to be able to use teaching practices that are appropriate to the objectives of the subject, the nature of the topics (content), and the learner, as well as to the requirements of the era; as it is of utmost importance that the educational

process and curricula keep pace with the era in which we live and its requirements and requirements; and that the educational objectives of the subject seek to achieve these requirements and link them to the specialization, and attempt to acquire these objectives among learners at various educational stages and in various specializations.

The teacher in general and the Arabic language teacher in particular play an important and pivotal role in developing the abilities and skills of his students, and moving them from stagnation and inactivity to interaction and activity, by placing them in educational and intellectual situations; This increases the ability to imagine, create, interpret, and evaluate (Mahmoud, 2012. 528).

The teacher is one of the important elements of the curriculum that greatly affects the development of the various skills of learners; the focus is not only on the content or educational activities or evaluation methods to develop language skills in learners, but the teacher must be prepared to qualify him to develop these skills, and he must use methods and strategies that work to develop them in his students; thus, the curriculum system is completed, as the role of the teacher in developing the various language skills is an essential and pivotal role; he is responsible and entrusted with teaching the language and acquiring its skills in students (Abdul Qader, 2020).

The call for these skills began with the Partnership for 21st Century Skills (P21), which was established by the US Department of Education and a group of educational institutions such as Microsoft and the National Education Association. This partnership has become one of the most important leaders in developing and teaching 21st century skills (Al-Baz, 2013, 196).

The Arabic language curriculum, like other curricula, must include 21st century skills in all their elements: starting with the objectives, content, activities, teaching methods, educational tools, and assessment methods, and that they be developed among students at all educational levels; due to their great benefits for the learner and society.

The educational process in the twenty-first century faces many challenges that require a review of teacher preparation programs: academically, professionally, and culturally; with the aim of helping them perform with high efficiency; This also requires the development of twenty-first century skills in learners; which requires that teachers' teaching practices include twenty-first century skills; so that this is reflected in their students (Hindawi, 2020).

The current era is characterized by a knowledge explosion, growing information, rapid developments in knowledge and information, and increasing development in teaching and learning methods and communication technology; This development has been reflected in the educational process, as knowledge is no longer fixed, but rather developing and renewable; Therefore, it has become necessary to develop the educational system with all its elements; As a result of the developments and changes witnessed by the twenty-first century in all fields; It has become necessary for the learner living in this century to have a creative mind and critical thinking; which requires the teacher to have a high degree of awareness and professional competence; so that he can develop his knowledge and teaching skills (Al-Sulaiti, 2015).

Shalaby (2014) stated that the twenty-first century brought changes that carry new challenges and horizons; which requires preparing a generation capable of facing them and dealing with them as active, productive, and even creative individuals within a cooperative framework based on effective communication in a world led by technological development. This will only come about by providing individuals with skills that enable them to do this; therefore, it has become necessary for countries to develop national education projects with the aim of reconsidering the future skills that individuals need to prepare them for life and work in the twenty-first century; as twenty-first century skills are necessary to ensure students' readiness to learn and innovate, and to make optimal use of information and technical media.

The teacher is the main pillar in the educational process, which seeks to reach distinguished levels of quality, and this will only be achieved by developing the teacher's skills and teaching practices to the

highest level that enables him to deal with the challenges and variables of the era, including the requirements of the twenty-first century (Wahdan, 2021).

The role of the teacher has changed in the twenty-first century; his role is no longer just a transmitter of knowledge and information to students, but his roles have diversified; to include innovation and renewal; which requires him to possess twenty-first century skills; to carry out his new role in the field; to ensure the quality of the outputs that are affected by his teaching practices in the educational process (Alimat, 2013).

The most important development topics on which the progress of societies and their ability to face the many and accelerating challenges are based is the topic of preparing the teacher in the twenty-first century; Specialists believe that the intentional and systematic integration of these skills into educational curricula will enable educators to achieve many goals that they have not been able to achieve for many years. They justify this by saying that these skills enable students to learn and achieve in core subjects at higher levels. They also provide an organized framework that ensures learners' engagement in the learning process, helps them build confidence, and prepares them for innovation and leadership in the twenty-first century, and to participate effectively in life. This is not limited to learners only, but also teachers, and it also represents a framework for the professional development of teachers (Hafni, 2015; Al-Balawi and Al-Balawi, 2019; Al-Otaibi, 2020).

It can be said that there is a deep gap between the skills that students learn in school and those they need in life and work in the knowledge-age society, and that current curricula are no longer sufficient to prepare students for life and work in today's changing world, which is driven by technological development (Bybee, 2010).

Many conferences have recommended the necessity of teachers possessing 21st century skills, and employing these skills in teaching practices that work to acquire and develop these skills for students, including: the Fifth Conference on Teacher Preparation "Teacher Preparation and Training in Light of Development Demands and Modern Developments" held at Umm Al-Qura University during the period 23-25 Rabi' Al-Thani 1437 AH, the International Conference "The Teacher and the Age of Knowledge: Opportunities and Challenges A Renewed Teacher for a Changing World" held at King Khalid University during the period 29/2-1/3/1438 AH, and the International Conference on Evaluation of Education and Training organized by the Education Evaluation Commission in Riyadh during the period 26-28 Rabi' Al-Awwal 1440 AH.

Opinions have also called for education to provide learners with the skills necessary to succeed in their societies and work in the 21st century, and therefore many institutions concerned with education have sought to formulate frameworks to identify and define 21st century skills, and propose how to integrate them within the educational system in general, and the basic fields of study in particular (Shalaby, 2014. 2).

Focusing in the educational process on the functions of one side of the brain (the left side) alone is not enough. Rather, skills and abilities that were not taken into account should be employed: as basic skills in qualifying for work, such as: creativity, innovation, and the ability to link elements and events to form something new. These are skills specific to the right side of the brain (Pink, 2005).

Twenty-first century skills are a necessity to prepare the individual for life and work in the jobs of the present and future era, in a manner consistent with the requirements of modern life, which is no longer compatible with traditional teaching practices that rely on indoctrination and memorization. Rather, they require new practices that require the teacher to play multiple roles to develop basic skills: such as critical thinking and problem solving, communication and teamwork skills, creativity and innovation skills, and media and digital literacy skills; This is done by teaching curricula, practicing classroom and extracurricular activities, and employing blended learning to ensure the quality of educational outcomes (Al-Ruwais, 2020).

Study Problem:

Given the importance of twenty-first century skills, the importance of including these skills in the teacher's teaching practices, and the studies' confirmation of this, including the study of each of: (Al-Yami, 2022; Al-Ruwais, 2021; Al-Shahri, 2021; Al-Jahni, 2019; Al-Bahrawi, 2015); the current research sought to reveal the level of teaching practices among Arabic language teachers at the intermediate stage in light of information technology, media and communication skills, and the problem of the current study was determined to reveal the level of teaching practices among Arabic language teachers at the intermediate stage in light of information technology, media and communication skills.

Study Objectives:

The current study aimed to determine:

- The teaching practices required for Arabic language teachers at the intermediate stage in light of information technology, media and communication skills.
- The level of teaching practices among Arabic language teachers at the intermediate stage in light of information technology, media and communication skills

- Study Questions:

The current study attempted to answer the following questions:

- What are the teaching practices required for Arabic language teachers at the intermediate stage in light of information technology, media and communication skills?
- What is the level of teaching practices among Arabic language teachers at the intermediate stage in light of information technology, media and communication skills?

Importance of the study:

The importance of the current study stems from the following:

- It helps researchers conduct similar research that reveals the level of teachers in teaching practices.
- Preparing a list of teaching practices necessary for Arabic language teachers in the intermediate stage in light of information technology, media and communication skills; It can be used to determine the level of teaching practices among teachers.
- It helps curriculum planners to include information technology, media and communication skills in Arabic language curricula.
- It helps teachers to include information technology, media and communication skills in their teaching practices.

Study limitations:

The current study was limited to:

- The teaching practices necessary for Arabic language teachers in the intermediate stage in light of information technology, media and communication skills, which are (information literacy skills, media literacy skills, information technology and communication culture skills).
- A sample of Arabic language teachers in the intermediate stage in the city of Abha.
- Applying this study in the second semester of 2021/2022 AD

Study methodology:

The current research used the descriptive analytical method; This is due to its suitability to the nature of the research and achieving its objectives.

Study community and sample: The study community consisted of all Arabic language teachers at the intermediate stage in Asir Education, while the study sample consisted of (30) Arabic language teachers.

Study terms:

1- Teaching performance:

The researcher defines it procedurally as: The procedures and practical methods that Arabic language teachers at the intermediate stage use to teach Arabic to their students; during the teaching process, so that these practices include digital culture skills (information culture skills, media culture skills, information and communication technology culture skills).

2- Information, media and communication technology skills:

The researcher defines it procedurally as: A set of skills that are included in the teaching practices of Arabic language teachers at the intermediate stage, to achieve the appropriate teaching performance for digital culture skills, and includes: (information culture skills, media culture skills, information and communication technology culture skills).

Theoretical Literature

21st century skills have been classified in many ways, the most important of which is the Partnership for 21st Century Skills P21 classification; where it divided them into three main areas, each of which includes sub-skills, and these areas are: (learning and innovation skills, information and communication technology skills, life and work skills; NSTA, 2013; P 21, 2006; Trilling and Fadel, 2013; Al-Saleh, 2013; Shalaby, 2014; Al-Helou, 2016; Al-Khazim and Al-Balawi, 2020; Al-Ruwais, 2020; Al-Sardiya, 2020; Al-Azab, 2020; Al-Ruwaished, 2021; Al-Otaibi, 2021; Ali, 2021). The following can shed light on the area of digital culture skills, which is the subject of the current study.

ICT Skills (Digital Culture):

This means the ability of the individual to create, evaluate and employ information, media and technology effectively, while ensuring the application of ethical and legal requirements; as individuals in the twenty-first century live in an environment characterized by technology, and the role played by media outlets is increasing, which are characterized by different characteristics than before, including: the abundance of information, and rapid changes in technology tools; therefore, this area of skills is necessary for dealing with contemporary society. This type of skills focuses on how to enable students to distinguish facts, publishing outlets, and the technology behind them, as well as focusing on the use of technology, media and communication; As they are necessary for preparing learners, they include information literacy skills, media literacy skills (media literacy), and ICT literacy skills (ICT literacy). This can be explained in some detail as follows (Trilling and Fadel, 2013; Al-Ruwais, 2020; Al-Otaibi, 2020; Al-Azab, 2020; Ali, 2021):

1- Information literacy skills.

It means the mechanism for dealing with and adapting to the huge amount of information in its various forms and sources in the era of the knowledge explosion, and includes some sub-skills, including: accessing information effectively, evaluating it critically, accurate use, and managing information. It is the culture that specializes in accessing information efficiently and effectively, using it, evaluating it, and managing it accurately. These skills are important to help individuals understand information and find the truth in an era surrounded by information.

2- Media literacy skills (media literacy).

It means developing the skills of receiving, analyzing, and criticizing media messages; to reach accurate information, and a deep understanding of the meaning. It is the culture that pertains to the media message, understanding it, constructing it, and the ethical and legal issues to which it is committed. It includes some sub-skills, including: analyzing the media message; To know its purpose,

understand how media messages are constructed, examine how individuals interpret messages differently, how values and viewpoints are included in these messages, how the media influences individuals' beliefs and behavior, and apply the real and essential mouth of the ethical and legal issues related to accessing and using media messages. Another skill is: creating media products and programs; to understand and use the most appropriate tools for media production, and to use the most appropriate expressions in diverse and multicultural environments.

3- ICT Culture Skills (ICT Culture).

It means using ICT, which is the effective application of technology as a search tool; to access information: such as using search engines, browsing tools, and taking advantage of digital technology such as computers, viewing devices, and smartphones. Some sub-skills include: the ability to apply technology effectively, organize and evaluate information, and effectively employ communication tools and social networks; to access and disseminate information. It also means the ability to communicate clearly and effectively; Meaning that the individual is able to express his ideas effectively using oral and written communication skills, verbal and non-verbal, in different forms and contexts, as well as listening effectively to reach the ambiguous meaning, and using communication for a range of purposes including: for guidance, information, motivation, and encouragement.

As well as communicating effectively in diverse and multilingual environments. And benefiting from multimedia and technology, and knowing how to judge their effectiveness at the beginning, and evaluating their impact at the end. These skills can be developed through practicing some classroom and extracurricular activities that enhance and support the presentation of media and digital culture, as well as some teaching strategies based on blended learning, and employing information, communication and media technologies in accessing knowledge and its applications. It also includes preparing individuals to be able to: Use technology effectively as a tool for research, organization, evaluation, and application. A fundamental understanding of the ethical issues associated with accessing and extracting information technology, all of which are necessary and important; Because despite the knowledge-age generation being distinguished by technology, they are always in dire need of guidance, advice and follow-up on the optimal use of digital tools and methods in learning tasks, and assessing the risks of using social media sites. Many studies have focused on the process of evaluating the curriculum and the skills of the twenty-first century. These studies include the following: (Saif, 2022; Bahrawi, 2021; Dawoud, 2021; Al-Ruwaished, 2021; Al-Shabl, 2021; Al-Shammari, 2021; Al-Shahri, 2021; Hilal, 2021; Baghdadi, 2020; Al-Khazim and Al-Balawi, 2020; Al-Sardiya, 2020; Al-Shahrani, 2020; Abdul-Barr, 2020; Al-Otaibi, 2020; Al-Azab, 2020; Al-Maghribi and Bani Khalaf, 2020; Hindawi, 2020; Al-Jahni, 2019; Al-Harbi, 2019; Al-Arfaj, Al-Khalidi and Al-Shahri, 2019; Al-Qahtani, 2019; Hajjah, 2018; Al-Ghamdi, 2018; Rabat, 2018; Abdel-Aal, 2018; Al-Mansour and Al-Adili, 2018; Al-Helou, 2016; Al-Ghamdi and Muhammad, 2016; Hussein Al-Arja, 2009). These studies recommended the need to pay attention to the twenty-first century skills of learners in various disciplines, and to include them in the curricula. This study is a response to previous studies.

Study procedures and preparation of its materials and tools:

First: A list of teaching practices in light of information technology, media and communication skills:

The list aimed to identify the teaching practices necessary for Arabic language teachers at the intermediate stage in light of information technology, media and communication skills as one of the areas of twenty-first century skills. In building the list, the researcher relied on reviewing some books, references, studies and research related to the research topic, as well as the opinions of some specialists in curricula and methods of teaching the Arabic language. The list consisted of teaching practices related to information technology, media and communication skills that fall under three sub-skills: information culture skills, under which (12) sub-practices fall, media culture skills, under which (12) sub-practices fall, information technology and communication culture skills, under which (12) sub-practices fall. Thus, the list consisted of (36) sub-practices.

Second: Questionnaire of teaching practices in light of ICT skills:

1- The aim of the questionnaire and its description:

The questionnaire aimed to measure the teaching practices of Arabic language teachers in light of ICT skills. The questionnaire was prepared by developing the previously prepared list; It consisted of the teaching practices that resulted from that list and related to ICT skills according to three main skills: (information culture skills, media culture skills, ICT culture skills), and this will be measured through (36) sub-practices.

2- Method of correcting the questionnaire:

The questionnaire was corrected by estimating the degrees (5-4-3-2-1) for each of (fully applicable - very applicable, sometimes applicable - slightly applicable - not applicable at all). The questionnaire scores ranged between (36-180) degrees.

3- Validity and reliability of the questionnaire:

A- Validity of the questionnaire:

The validity of the questionnaire was confirmed through content validity; The questionnaire was presented to six arbitrators in the field of curricula and teaching methods, to express their opinion on it in terms of: its suitability for the research sample, and the relevance of the questions to the topic, and the arbitrators confirmed that it was appropriate.

B - Questionnaire reliability:

The questionnaire reliability was calculated using the Cronbach's alpha equation (α coefficient), using the SPSS (18) statistical program. The reliability coefficient reached (0.851), and thus the questionnaire has an appropriate degree of reliability.

Application of research tools:

The study was applied in the academic year 2021/2022 AD. After completion of the application, it was corrected, and the grades were recorded in preparation for statistical processing, discussion and interpretation.

Research results:

1- Answering the first question:

The first question stated: What are the teaching practices required for Arabic language teachers in light of information technology, media and communication skills? To answer this question, a list of teaching practices required for Arabic language teachers in light of information technology, media and communication skills was prepared. It was presented to the arbitrators, and a list was reached, which is explained in detail in the research procedures.

2- Answering the second question:

The question stated: What is the level of teaching performance among Arabic language teachers at the intermediate stage in light of information technology, media and communication skills? To answer this question, the significance of the averages, percentage and level were calculated; As shown in the following table:

Table (1): Averages and percentages in the main areas of teaching performance and the questionnaire as a whole

the field	Average	Standard deviation	ratio	Arrangement
Performance related to information literacy skills	27.60	3.94	46 %	the third
Performance related to media literacy skills	27.90	4.40	48.17 %	the first

Performance related to ICT culture skills	26.63	4.75	44.38 %	the second
Dimensions as a whole	84.12	10.12	46.74 %	

The previous table shows that the level of teaching performance of Arabic language teachers in the intermediate stage in light of the skills of information technology, media and communication, the averages of the questionnaire areas came as follows: the average of practices related to information literacy skills (27.60), at a rate of (46%), the average of practices related to media literacy skills (28.90), at a rate of (48.17%), the average of practices related to information technology and communication culture skills (26.63), at a rate of (44.38%), and the general average of practices as a whole (84.13), at a rate of (46.742), which is limited to the low level; thus, the second question of the research questions was answered, which states: What is the level of appropriate teaching practices for Arabic language teachers in the intermediate stage in light of information technology, media and communication skills.

Interpretation of the results: The results of the first hypothesis of the research hypotheses showed a decrease in the level of teaching performances among Arabic language teachers at the intermediate stage in light of the skills of information technology, media and communication. This result can be attributed to: Arabic language teachers' use of traditional teaching practices that do not take into account ICT skills. These practices do not develop students' ICT skills, including employing educational technologies in explanation, evaluation, and information enrichment, employing computer programs in presenting and evaluating topics, guiding students to the ethics of digital interaction (websites and social media), employing blended learning, encouraging students to access information and receive it properly themselves, evaluate and criticize it, using technology to search for, organize, and evaluate information, using social media to access and disseminate information, as well as developing students' positive attitudes toward using digital technologies and managing electronic information from multiple sources. Teachers do not provide diverse sources of information related to teaching Arabic, or employ media information in projects related to teaching Arabic, or design educational activities in teaching Arabic that require collecting information from its original sources, or are based on oral communication and discussion skills, or directing students to respect other opinions during the discussion, or employing teaching strategies that help generate ideas such as brainstorming.

Research Recommendations:

In light of the results of the study, a set of recommendations can be presented, the most important of which are:

- Linking teaching performance to the skills and requirements required by the era.
- Holding training courses focusing on information technology, media and communication skills.
- Developing Arabic language teachers' teaching performance.
- Focusing on the professional development of teachers in various teaching fields; to keep pace with development and innovation in the field.

Suggested Research:

In light of the results and recommendations of the research, the following research points can be proposed:

- The level of teaching performance among Arabic language teachers at the primary stage.
- The level of Arabic language teachers' methods of developing twenty-first century skills.

ACKNOWLEDGEMENT:

The authors extend their appreciation to the Deanship of Research and Graduate Studies at King Khalid University for funding this work through large Group project under grant number (270/1445).

REFERENCES

- Abu Jarad, Hamdi Younis (2020). Students' assessments of the teaching practices of faculty members at Al-Quds Open University. *Al-Manara Journal for Research and Studies*. Vol. (26). No. (2). 171-192.
- Al-Aswad, Al-Zahra Ali (2021). Building a tool to measure teaching practices in promoting creative behavior among university students. *Journal of Humanities*. Vol. (5). (2). 142-159.
- Al-Baz, Marwa Muhammad (2013). Developing the science curriculum for the third year of middle school in light of twenty-first century skills. *Journal of Scientific Education*. Vol. (16). No. (6). 191-231.
- Bahrawi, Atef Abdullah (2021). The degree of possession of graduate students in special education specializations of twenty-first century skills. *Journal of Special Education and Rehabilitation*. Special Education and Rehabilitation Foundation. Vol. (13). No. (44). September. 1-35.
- Al-Bahrawi, Fathi Mabrouk (2015). Professional performance standards required for student teachers in light of twenty-first century skills. *Arab Studies in Education and Psychology*. Arab Educators Association. No. (63). 435-484.
- Baghdadi, Manal Muhammad (2020). Evaluation of the content of the science book for the third intermediate grade in light of the twenty-first century skills. *Studies in curricula and teaching methods*. The Egyptian Association for Curricula and Teaching Methods. Ain Shams University. No. (248). 73-96.
- Al-Balawi, Awatif Falakh and Al-Balawi, Aisha Muhammad (2019). A vision for a training program to develop some twenty-first century skills among primary school mathematics teachers in Tabuk City. *Arab Studies in Education and Psychology*. No. (107). March. 387-433.
- Al-Baytar, Hamdi Muhammad (2021). Twenty-first century skills for students of industrial technical secondary education in Egypt in the digital age. *Educational Journal*. Sohag University. Vol. (91). November. 4602-4620.
- Bayoumi, Yasser Abdel Rahim and Al-Jundi, Hassan Awad (2019). The reality of classroom teaching practices of primary school mathematics teachers in light of contemporary professional standards for teaching and learning mathematics. *Journal of Mathematics Education*. Egyptian Society for Mathematics Education. (22). (1). 6-67.
- Al-Tamran, Omar Saad and Khalil, Ibrahim Al-Hussein (2019). Teaching practices of male and female mathematics teachers in light of the requirements of the Kingdom of Saudi Arabia's Vision 2020 from their point of view. *Arab Studies in Education and Psychology*. Arab Educators Association. No. (111). 199-218.
- Jabra, Abdullah Yahya (2020). A proposed training program based on the constructivist theory to develop teaching practices for Arabic language teachers in the primary stage and its impact on developing self-regulated learning skills and linguistic wealth among their students. PhD thesis. College of Education. King Khalid University.
- Al-Jahni, Amal Saad (2019). Evaluating the performance of science teachers in light of twenty-first century skills. *Arab studies in education and psychology*. Arab Educators Association. No. (116). December. 23-50.
- Jawahry, Samir (2021). Evaluating the teaching performance of university professors in light of the standards for ensuring the quality of education from the students' point of view. *Journal of Humanities and Social Sciences*. Abdel Hamid Mehri University. Constantine 2. Vol. (7). No. (2). 361-391.
- Al-Harbi, Ibrahim Salim (2019). The extent of including twenty-first century skills in mathematics books for the third intermediate grade. *Journal of Education*. Al-Azhar University. No. (183). Vol. (1). July. 512-554.

- Hassan, Ali Attia (2020). Evaluation of the reality of teaching practices of special education teachers for the intermediate stage in Baghdad Governorate. *Journal of Physical Education Sciences*. University of Babylon. College of Physical Education. Vol. (13). No. (1). February. 390-408.
- Hafni, Maha Kamal (2015). Skills of the twenty-first century teacher. The twenty-fourth scientific conference. The Egyptian Society for Curricula and Teaching Methods. Teacher preparation programs for excellence. Cairo: Ain Shams University. Dar Al-Diafa. August 12-13.
- Al-Helou, Narmin Mustafa (2016). Awareness of home economics teachers of twenty-first century skills in light of professional development and their attitudes towards them. *Journal of the Faculty of Education*. Kafr El-Sheikh University. Vol. (16). No. (3). 461-540.
- Al-Khazim, Khaled Mohammed and Al-Balawi, Abdullah Marzouq (2020). The level of teaching practices among primary school mathematics teachers to develop learning and creativity skills according to the requirements of the twenty-first century. *Journal of Mathematics Education*. The Egyptian Society for Mathematics Education. Vol. (23). No. (5). July. 28-56.
- Dawoud, Samir Saeed (2021). The effect of free reading on developing in-depth reading and some twenty-first century skills among student teachers at the Faculty of Education. *Educational Journal*. Sohag University. November. 301-343.
- Al-Rabat, Bahira Shafiq (2018). The effectiveness of integrating the thinking maps strategy and the dual-situation-based learning model to develop some twenty-first century skills in the study of geometry. *Journal of Mathematics Education*. The Egyptian Society for Mathematics Education. (21). (12). October. 277-368.
- Al-Ruwais, Aziza Saad (2021). Evaluating teaching practices in light of twenty-first century skills for primary school teachers in Riyadh. *Journal of the Islamic University for Educational and Social Sciences*. Islamic University of Madinah. No. (5). March. 229-277.
- Al-Ruwaished, Noha Rashid (2021). The extent of the availability of twenty-first century skills in teaching mathematics according to the opinions of its teachers in the State of Kuwait. *Journal of the Faculty of Education in Educational Sciences*. Ain Shams University. Vol. (45). No. (1). 273-312.
- Al-Sardiya, Haya Khalaf (2020). Twenty-first century requirements for special education teachers in light of the Kingdom's Vision 2030. *International Journal of Research in Educational Sciences*. Vol. (3). No. (1). 387-421.
- Al-Sulaiti, Dhibya Saeed (2015). A proposed vision for reading teacher skills in light of the twenty-first century requirements in independent schools in the State of Qatar. *Education*. Al-Azhar University. Egypt. 164. (3).
- Al-Sahli, Sarah Muhammad and Al-Harbi, Muhammad Sunt (2021). Habits of mind among mathematics teachers in the intermediate stage and their relationship to the teaching practices necessary to develop them among their students. *Journal of the Faculty of Education*. Menoufia University. Vol. (36). No. (1). March. 70-107.
- Al-Shabl, Manal Abdel Rahman (2021). The reality of digital learning in enhancing twenty-first century skills from the perspective of mathematics teachers and supervisors in secondary school in the Kingdom of Saudi Arabia. *Shaqra University Journal for Humanities and Administrative Sciences*. Issue (15). 343-367.
- Al-Sharif, Khaled Mohammed (2021). Teaching practices of mathematics teachers in the Kingdom of Saudi Arabia based on the teaching quality model and its impact on students' attitudes towards mathematics. *Journal of Mathematics Education*. Egyptian Society for Mathematics Education. (24). (3). 255-287.
- Shalaby, Nawal Mohammed (2014). A proposed framework for integrating twenty-first century skills into science curricula in basic education in Egypt. *International Specialized Educational Journal*. Vol. (3). No. (10). 1-33.
- Al-Shammari, Salman Hadid (2021). The degree of acquisition of twenty-first century skills by mathematics majors at Shaqra University from the perspective of faculty members. *Educational Journal*. Kuwait University. Vol. (35). No. (139). June. 213-254.
- Al-Shammari, Afif Aliwi and Al-Arini, Hanan Abdul Rahman (2019). The reality of teaching practices among primary school mathematics teachers in light of mathematical prowess. *Journal of*

- Mathematics Education. Egyptian Society for Mathematics Education. Vol. (22). No. (6). April. 85-137.
- Al-Shahrani, Muhammad Burjas (2019). Teaching practices required for faculty members at Bisha University to develop athletic strength skills among its students. *Educational Journal*. Sohag University. Vol. (92). December. 292-322.
- Al-Shahri, Abdulrahman Ali (2021). The level of inclusion of twenty-first century skills in textbooks at the intermediate stage. *Journal of Educational Sciences*. King Saud University. Vol. (33). No. (2). 307-333.
- Al-Shahri, Mani Ali (2021a). Evaluation of the level of teaching practices among mathematics teachers at the intermediate stage in light of twenty-first century skills. *Educational Journal*. Faculty of Education. Sohag University. Vol. (86). June. 1139-1181.
- Al-Shahri, Mani Ali (2021b). Evaluation of the level of teaching practices among mathematics teachers at the intermediate stage in light of twenty-first century skills. *Educational Journal*. Sohag University. Vol. (86). June. 1139-1181.
- Al-Saleh, Badr Abdullah (2013). *21st Century Skills: Learning for Life in Our Time*. King Saud University. Scientific Publishing and Printing.
- Subaih, Wafaa Abdullah (2022). *The Degree of Practice of Arabic Language Teachers in the Primary Stage of 21st Century Skills*. Master's Thesis. College of Educational Sciences. Al al-Bayt University. Jordan.
- Al-Salahi, Muhammad Issa (2019). Teaching Practices of Mathematics Teachers Supporting the Comprehension of Mathematical Concepts at the Primary Stage. *Journal of Mathematics Education*. The Egyptian Society for Mathematics Education. Vol. (22). No. (9). July. 173-197.
- Zalami, Ayman Gibran (2020). Teaching Practices of Mathematics Teachers at the Intermediate Stage in Light of Marazzano's Learning Dimensions Model. *Journal of Mathematics Education*. The Egyptian Society for Mathematics Education. Vol. (23). No. (3). April. 217-239.
- Abdul-Barr, Abdul-Nasser Muhammad (2020). Developing the mathematics curriculum within Egypt's vision for sustainable development 2030 and its impact on developing some twenty-first century skills among middle school students. *Journal of Mathematics Education*. Egyptian Society for Mathematics Education. (23). (7). October. 7-81.
- Abdel Qader, Mahmoud Hilal (2020). The level of Arabic language teachers' mastery of methods of developing creative understanding skills among fifth-grade primary school students, *Journal of the Islamic University for Educational and Psychological Studies*, Volume (28), Issue (6), 309-330.
- Abdel Aal, Mohamed Sayed (2018). The effectiveness of a program enhanced with Web2 tools in developing twenty-first century skills among mathematics teachers at the Faculty of Education. *Journal of Mathematics Education*. Egyptian Society for Mathematics Education. (21). (6). 214-269.
- Al-Otaibi, Reem Hamoud (2020a). The reality of twenty-first century skills. *Journal of Reading and Knowledge*. Egyptian Society for Reading and Knowledge. No. (230). December. 323-354.
- Al-Otaibi, Salman Sahoud (2020b). The level of awareness of secondary school mathematics teachers in Al-Kharj Governorate of the most important teaching practices consistent with the brain-based learning approach. *Arab Studies in Education and Psychology*. No. (125). September. 123-141.
- Al-Azab, Rehab Amin (2020). Characteristics of faculty members in light of twenty-first century skills and their relationship to providing students with twenty-first century skills from the perspective of university students. *International Journal of Educational and Psychological Sciences*. No. (55). 101-155.
- Alimat, Muhammad Muqbil (2013). The degree of representation of primary school teachers in Jordan for knowledge economy skills and its relationship to their teaching practices from the perspective of their supervisors. *Al-Manara Journal*. 3. (9).
- Al-Anzi, Ahmed Abdullah (2020). The effectiveness of a training program based on international standards for educational technology in improving teaching practices and professional

- leadership skills for Arabic language teachers in the State of Kuwait. PhD thesis. World Islamic Sciences University. College of Graduate Studies. Jordan.
- Al-Ghamdi, Mona Saad (2018). Training needs and challenges facing mathematics teachers in light of the skills of the twenty-first century teacher. *Journal of the Faculty of Education*. Tanta University. M (70). No (2). April. 468-528.
- Al-Faqih, Masha'el Muhammad (2017). The level of teaching practices of Arabic language skills among female student teachers at the Faculty of Education from the perspective of cooperating teachers and their attitudes towards the teaching profession. *Journal of the Islamic University for Educational and Psychological Studies*. Gaza. Palestine. Vol. (25). No (3). July. 88-105.
- Al-Fahid, Khalid Abdulrahman (2018). The development of effective teaching practices among student teachers in the field of Islamic sciences in Saudi universities in light of the renewed educational requirements. *Journal of Education*. Al-Azhar University. No. (179). Vol. (2). July. 360-406.
- Al-Qahtani, Othman Ali (2019). The effectiveness of a proposed strategy based on mathematical communication in developing some twenty-first century skills among primary school students. *King Khalid University Journal of Educational Sciences*. College of Education. King Khalid University. Vol. (6). No. (1). January. 207-235.
- Al-Qaseem, Muhammad Mahmoud (2019). Evaluation of lenient teaching practices among science teachers in the intermediate stage according to the estimates of educational supervisors in the Kingdom of Saudi Arabia. *Journal of Educational Sciences*. Imam Muhammad ibn Saud Islamic University. No. (20). 89-162.
- Mahmoud, Ahmed Hassan (2018). The effectiveness of an enrichment program based on some twenty-first century skills to develop mathematical strength and mathematical thinking among academically outstanding students in the intermediate stage. *Journal of Mathematics Education*. Egyptian Society for Mathematics Education. (21). (11). 326-340.
- Mahmoud, Abdel Razek (2012): A program based on authentic teaching standards to develop the creative skills of Arabic language teachers and the habits of productive mind among their students. *Journal of the Faculty of Education, Assiut*. Vol. (28). No. (1). 517-611. January.
- Murad, Awda Suleiman and Mahasneh, Omar Musa (2020). Evaluating the quality of teaching practices among university faculty members from the students' point of view. *Journal of the Islamic University for Educational and Psychological Studies*. Gaza. Palestine. Vol. (28). No. (2). March. 551-573.
- Al-Maghribi, Ayat Muhammad and Bani Khalaf, Mahmoud Hassan (2020). The level of acquisition of digital culture skills by eighth-grade students in light of twenty-first century skills in science education. *Journal of Al-Quds Open University for Educational and Psychological Research and Studies*. Al-Quds Open University. Vol. (11). No. (30). 17-29.
- The Fifth Conference on Teacher Preparation (1437 AH). Teacher preparation and training in light of development demands and modern developments. Umm Al-Qura University. Makkah Al-Mukarramah, 23-25 Rabi' Al-Thani.
- International Conference (1438 AH). The teacher and the age of knowledge: opportunities and challenges A renewed teacher for a changing world. King Khalid University. Abha. 29 Rabi' Al-Awwal - 1 Rabi' Al-Thani.
- International Conference on Education Evaluation (1440 AH). Future skills. Their development and evaluation. Education and Training Evaluation Commission. Riyadh, 26-28 Rabi' Al-Awwal.
- Hilal, Samia Hassanein (2021). The effectiveness of a developed unit in light of the STEM cognitive integration approach in developing some twenty-first century skills among primary school students. *Journal of Mathematics Education*. Vol. (24). No. (3). January. 221-254.
- Hindawi, Imad Muhammad (2020). The effect of using the service learning strategy in learning chemistry to develop twenty-first century skills among chemistry teacher students at the Faculty of Education. *Journal of Science Education*. The Egyptian Society for Science Education. Vol. (23). No. (3). March. 151-195.

- Wahdan, Mayada Mohamed (2021). Curricula and 21st century skills to develop life practices among first-year secondary school students in music education. Educational Sciences. Graduate School of Education. Cairo University. Vol. (29). February. 377-391.
- Al-Yami, Naji Mohamed (2022). Evaluating the teaching practices of primary school mathematics teachers in light of 21st century skills. Master's thesis. College of Education. King Khalid University.
- Astleinter, H. (2002). Teaching Critical Thinking. *Journal of Instructional Psychology*, v(29), n(2), 53-76.
- Bybee, W.R. (2010). *The Teaching of Science: 21st Century Skills Perspectives*, NSTA Press.
- Ken, K. (2010). 21st Century Skills. Why they matter, What They are, and How we get there? Available at: <http://www.Innovationlabs.Com.plsd/resources/kenkay.pdf>.
- Partnership for 21st Century Skills (2006). Framework for 21st Century Learning. Retrieved from: <http://www.battelleforkids.org/networks/p21>.
- Peterson, A.d. (2003). *Schools Across Frontiers: The story of the International Baccalaureate and the United World Colleges USA*: Carus Publishing Company, ISBN 0-49505-8126.
- Pinke, D.H. (2005). *A whole New Mind* the Penguin Group New York, USA.
- Steele Jennifer L., Hamilton Laura S., Stecher Brian M. (2010). *Incorporating Student Performance Measures into Teacher Evaluation Systems*. the RAND Corporation
- The National Science Teacher Association. (2013). *Quality Science Education and 21st Century Skills*. <http://www.Nsta.Org>.