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Teacher Digital Empowerment Level in Light of the Kingdom of Saudi Arabia's Vision "2030": Reality and Aspirations

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Abstract. This study aims to analyze the level of digital empowerment among male and female teachers in light of Saudi Arabia's vision"2030" and investigate the effect of (gender, specialization, and experience) variables on these levels. For this purpose, the researchers prepared the teachers' digital empowerment questionnaire. The study sample comprised of (263) middle and secondary stage teachers. Results revealed that there are statistically significant differences in the levels of digital empowerment due to gender in the axis of the digital communication in favor of female teachers and the axis of the digital environment in favor of male teachers, while there are no statistically significant differences in the levels of the teachers' digital empowerment due to specialization. Also, there are statistically significant differences due to years of experience in the axis of digital evaluation in favor of teachers with more than ten years of experience. In light of these results, the researchers presented a suggested proposal for teachers' digital empowerment to achieve the Kingdom's vision"2030". In light of these results, the researchers presented a suggested proposal for teachers' digital empowerment to achieve the Kingdom's vision"2030".

Keywords: Digital Empowerment, Teacher, The Kingdom of Saudi Arabia, Saudi Arabia's Vision"2030"

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INTRODUCTION

The effectiveness of e-learning as one of the educational methods that depend on providing digital content depends mainly on the teachers' ability to merge numerous learning activities throughout various electronic systems (Scheib and Warren, 2020).

Wang's (2016) model of Technological Pedagogical Content Knowledge (TPACK) affirmed the significance of teachers' emphasis on integrating technology into content structures and pedagogical domains and that teachers should utilize digital applications that support learning. Besides, Agrwal (2007) added that teacher has an essential role in the information technology revolution, as one of the new teacher's tasks to confront the challenges of this era is to use modern technology with high efficiency.

The COVID-19 pandemic enforces many governments to take rigorous decisions to control its' transmission, such as suspending attendance to schools. Consequently, the educational system around the world has responded and adapted quickly to ensure the continuity of education through depending on distance education and ICT. Consequently, teachers rely on providing lessons online (United Nations, 2020).

In response to this demand, the Kingdom of Saudi Arabia, represented by the Ministry of Education, has witnessed serious transformations in developing digital educational practices through providing technological devices and building a professionally qualified system to employ these devices and software. (The General Administration of Education in Riyadh, 2020).

The Education and Training survey carried out by the General Authority for Statistics in the Kingdom of Saudi Arabia (2017) revealed the percentage of using educational aids by Saudi families and the internet was the most educational aids used by them with a rate of 84.4%, followed by mobile phones 81.8%, then computers 68.6%. Therefore, teachers must be equipped with the skills and competencies to work in digital empowerment, especially in teaching and learning.

Essentially, the transition from traditional to distance education in Saudi Arabia followed an accurate plan, which assigns goals for all members within the framework of a study prepared by the National

Center for E-learning in the Kingdom in partnership with several institutions such as UNESCO. This study highlighted the Kingdom's efforts in digital transformation compared to 36 countries according to a set of criteria. The Saudi Press Agency, 2020). Accordingly, this supported the current study orientation to identify and measure the teacher's digital empowerment level in Saudi Arabia.

Research Questions

1. What is the level of digital empowerment among middle and high school teachers in the Kingdom of Saudi Arabia?
2. Are there statistically significant differences at the level of (0.05) in the level of digital empowerment in its axes (digital technologies in teaching, digital communication, digital evaluation, and supportive digital environment) among the middle and secondary school teachers in the Kingdom of Saudi Arabia due to the variables of gender, specialization, and experience?
3. What is the suggested proposal for developing the digital empowerment of middle and secondary school teachers in the Kingdom of Saudi Arabia in light of the Kingdom's vision "2030"?

Research Objectives

The current research aims at:

1. Identifying the level of digital empowerment among middle and high school teachers in the Kingdom of Saudi Arabia.
2. Investigating the effect of gender, specialization, and experience variables in the level of digital empowerment among middle and secondary school teachers in the Kingdom of Saudi Arabia.
3. Presenting a suggested proposal for developing digital empowerment of middle and secondary school teachers in the Kingdom of Saudi Arabia.

METHODS

Research design and methods

The current study adopted the descriptive survey approach, which relies on studying reality and studying the phenomenon as it is, and then describing and expressing it quantitatively and qualitativelyIt gives information about the method and the process followed in the study. Cambria, 11 font, single line spacing, and first line indented 1cm, no space between paragraphs.

Participants

The research community consisted of (1052) teachers of the Educational Administration in Wadi Al-Dawasir Governorate, who are on the job during the first semester of the 2020 academic year and practicing the educational process. For verifying the psychometric properties of the questionnaire in terms of validity and reliability, the researchers selected (55) male and female teachers as a pilot sample- except for the main research sample- at the beginning of the first semester of the academic year 2020, while the basic research sample was randomly selected and consisted of 184 (25%) of different middle and high schools in Wadi Al-Dawasir Governorate. the main variables of the research community were illustrated in table 1.

Table 1. *Research Sample Description According to Gender, Specialization, and Experience Variables*

Independent variables		Frequency	Valid%
Gender	Male	71	38.6
	Female	113	61.4
	Total	184	100
Specialization	Scientific	104	56.5
	Literary	80	43.5
	Total	184	100
Teacher Experience	10 years or less than	110	59.8
	More than 10 years	74	40.2
	Total	184	100.0

It is clear from table 2 that approximately (61%) of the research sample are females, , and (60%) of the sample have 10 years of experience or less.

Instruments

For data collection, the researchers prepared the teachers' digital empowerment questionnaire in light of the Kingdom's vision "2030". After reviewing related literature (Akkoyunlu and Yilmaz, 2011; Al-Hayeki and Al-Omari, 2017; Al-Rahili, 2019) and within the framework of the research objectives, the researcher prepared the questionnaire in its preliminary form from two main parts: the first part includes basic data (research variables which are (gender - specialization – experience), the second part represents the questionnaire items related to the digital empowerment of the teacher in light of the Kingdom's vision "2030".

For correcting the questionnaire, the five-point Likert questionnaire was utilized to obtain the sample responses according to the following: (5 highly agree -4 agree – 3 agree with a medium degree- 2 disagree -1 highly disagree). The questionnaire was presented in its initial form to specialized arbitrators, to determine the appropriateness of the statements to the axis to which it belongs and the clarity of each item. The necessary modifications or deletion or addition have been conducted. Accordingly, the questionnaire in its final form consisted of (30) items distributed as follows: the first axis the digital technologies in teaching (9 items), the second axis concerns digital communication (5 items), the third axis concerns the evaluation of the digital environment (5 items), and the fourth axis concerns the availability of a supportive digital environment (11 items).

To verify the questionnaire's internal consistency, the researcher utilized Pearson's Correlation Coefficient. The values of correlation coefficients of the first axis ranged from (0.693-0.809), the second axis (0.855-0.912), the third axis (0.807-0.876), and the fourth axis (0.580-0.742). The values of the correlation coefficients between the four axes and the total degree of the questionnaire were also calculated and they were as follows (0.842 - 0.772 - 0.633 - 0.291). All values were significant at the level (0.01), confirming the internal consistency of the items with their axes and the axes with the overall degree of the questionnaire.

The questionnaire reliability was confirmed by calculating alpha Cronbach's coefficients, as shown in Table (2), revealing that the reliability coefficient of the scale as a whole was (0.93), which was a high-reliability coefficient.

Table 2 .*The Reliability of the Digital Empowerment Questionnaire for the Teacher In Light Of the "2030 Vision."*

Axis of the questionnaire	Alpha coefficient (α)
Digital technologies in teaching	.911
Digital communication	.931
Digital evaluation	.895
Supportive digital environment	.853
Total	.929

Field Application

The questionnaire was designed electronically using Google drive models and sent to the Education Department in Wadi Al-Dawasir Governorate to send it to teachers. It was implemented at the beginning of the first semester of the 2020-2021 academic year.

Statistical Treatment

For data analysis, the researchers utilized SPSS V.20 program, where descriptive statistics as arithmetic means, standard deviations, variance analysis test for multiple dependent variables (MANOVA) were used.

RESULTS

Firstly, to identify the level of digital empowerment among middle and high school teachers in Saudi Arabia, the researchers calculated standard deviations and means of all axis's statements.

Table 3. *Means and Standard Deviations of Digital Technologies in Teaching Axis*

N.	Statement	Mean	Std. Deviation	Rank
1	**I employ my skills in using the computer in teaching**	3.75	.851	4
2	**I use online media and online educational materials in teaching**	3.76	.843	3
3	**I employ teaching strategies compatible with e-learning (such as discussion groups, project-based learning, and flipped classroom learning)**	3.39	.910	5
4	**I build interactive digital educational activities and experiences that are useful in communicating information in a way that is suitable for all students, age groups, and lesson content.**	3.54	.910	5
5	**I am constantly exploring new tools and applications in e-learning to test their applicability to content and students.**	3.50	.964	6
6	**I have knowledge about the use of forums, blogs, wikis, virtual classes, and the differences between them, and their use to serve learning goals.**	3.36	.982	9
7	**I can create and manage online virtual classes with various applications (such as Microsoft Teams, Zoom, and Google classes).**	3.88	.935	2
8	**I employ all capabilities available in digital learning platforms (such as Madrasati) in e-learning.**	4.13	.850	1
9	**I solve the basic technical problems that I may face in e-learning**	3.47	.980	7
	Degree of digital technologies in teaching	3.64	.699	

Table 3 indicated that participants have a high digital mastery level in the axis of digital technologies in teaching and that the statement of (I employ all capabilities available in digital learning platforms was the highest one, while the statement of (I have knowledge about the use of forums, blogs, wikis, virtual classes) was the lowest one.

Table 4.*Means and Standard Deviations of Digital Communication Axis*

N.	Statement	Mean	Std. Deviation	Rank
1	**I can create continuous and organized interaction between me and my students and achieve cooperation between them in the e-learning environment.**	3.82	.816	2
2	**I use various means of communication to deliver instructions in order to achieve effective communication and support the participation of all students in the e-learning environment (such as e-mail, chat, and virtual classes).**	3.95	.873	1
3	**I provide rapid and regular feedback to support student engagement and interaction in e-learning.**	3.75	.931	4
4	**I implement standards of appropriate behavior for communication between me and my students in the e-learning environment.**	3.76	.841	3
5	**I communicate with my students regarding their education in an e-learning environment.**	3.65	.934	5
	The degree of digital communication	3.78	.779	

Table 4 indicated that participants have a high digital mastery level in the axis of digital communication and statement of (I use various means of communication to deliver instructions in order to achieve effective communication and support the participation of all students in the e-learning environment was the highest one, while the statement of (I communicate with my students regarding their education in an e-learning environment) was the lowest one.

Table 5 *. Means and Standard Deviations of the Digital Evaluation Axis*

N.	**Statement**	Mean	Std. Deviation	Rank
1	**I use electronic assessment tools (such as electronic tests, assignments, discussion rooms)**	3.87	.902	1
2	**I follow the evaluation of students' learning in e-learning (ex: tracking virtual classroom reports, discussion rooms, and marking assignments)**	3.72	.909	2
3	**I use electronic records to keep student evaluations on assignments and tests.**	3.28	1.021	4
4	**I make formative and summative assessments using tests, assignments, and opinion polls to measure the achievement of learning goals in the e-learning environment.**	3.31	.984	3
5	**I apply standards to ensure academic honesty associated with intellectual property (such as copyright laws) in submitting students' assignments online.**	3.08	1.182	5
	The degree of Digital Evaluation	3.45	0.843	

Table 5 indicated that participants have a high digital mastery level in the axis of digital evaluation and the statement of (I use electronic assessment tools) was the highest one, while the statement of (I apply standards to ensure academic honesty associated with intellectual property) was the lowest one.

Table 6 . *Means and Standard Deviations of Supportive Digital Environment Axis*

N.	**Statement**	*Mean*	*Std. Deviation*	*Rank*
1	**The school has computer labs equipped to activate e-learning.**	3.26	1.324	8
2	**The school has an internet network that helps to implement e-learning during school hours.**	3.16	1.434	9
3	**The educational institution provides computers (laptops) for teachers to facilitate the use of technology in the educational process and follow up students' learning in e-learning.**	2.95	1.329	10
4	**The educational institution holds continuous training courses to develop my skills in applying e-learning.**	3.28	.956	7
5	**The digital learning platforms of the Ministry of Education (such as the Madrasati platform) have all the necessary capabilities for managing e-learning.**	3.81	.837	1
6	**Audio media are available in digital content on e-learning platforms.**	3.49	.899	4
7	**Visual media are available in digital content in e-learning platforms.**	3.54	.781	3
8	**Audiovisual media are available in digital content in e-learning platforms.**	3.56	.808	2
9	**The digital content is provided in the learning platforms in the form of interactive texts that support the teaching and learning needs.**	3.36	.850	5
10	**The manuals and mechanisms for technical and educational support for the teacher are available through the e-learning platforms of the Ministry of Education.**	3.36	.870	6
11	**The educational institution encourages me to activate e-learning by allocating material or moral rewards.**	2.69	1.148	11
	The degree of availability of a supportive digital environment	3.31	.667	

Table 6 indicated that the research sample agreed on the availability of a supportive digital environment in a moderate degree and that the statement of (The digital learning platforms of the Ministry of Education (such as Madrasati platform) have all the necessary capabilities for managing e-learning) was the highest one, while the statement of (The educational institution encourages me to activate e-learning by allocating material or moral rewards) was the lowest one.

In total, through the comparison between the results shown in tables (3-6), it was clear that teachers have a digital empowerment level in the axes of digital technologies in teaching, digital communication, and digital evaluation; while they have a moderate level in the axis of the supportive digital environment.

Secondly, to investigate the effect of gender, specialization, and experience variables in the level of digital empowerment among the middle and secondary school teachers in the Kingdom of Saudi Arabia, A MANOVA (Multivariate analysis of variance) was conducted. Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multicollinearity, with some violations noted. Levene's test for one variable scored less than .05 (see Table 7). Due to these violations, an adjusted alpha level of .0125 was used in accordance with Pallant (2007).

Table 7. *Equality of Error Variances (3)*

Factors	*F*	*df1*	*df2*	*Sig.*
Digital technologies in teaching	2.464	1	182	.118
Digital communication	2.137	1	182	.146
Digital evaluation	2.070	1	182	.152
Supportive digital environment	.048	1	182	.827

In Table 8, the results of MANOVA revealed that there were significant differences between the gender and Digital communication and Supportive digital environment.

Table 8. *Multivariate Tests (4)*

Variable		*Value*	*MultiF*	*Hypothesis df*	*Error df*	*Sig.*	*Partial Eta Squared*
Wilks' Lambda		.832	9.064b	4.000	179	.000	.168

Table 9 demonstrated that there were significant differences between the gender and Digital communication ((F= 1, 182) = 8.046, p = .005, ŋ2 =.042). Also that there were significant differences between the gender and Supportive digital environment ((F= 1, 182) = 16.171, p = .000, ŋ2 =.082).

Table 9. *Relationship between Gender and the Axes*

Independent variable	Dependent variable	Type III Sum of squares	df	Error df	Mean square	UniF	Sig.	Partial eta squared
Gender	Digital technologies in teaching.	.776	1	182	.776	1.591	.209	.009
	Digital communication	4.703	1	182	4.703	8.046	.005	.042
	Digital evaluation	3.208	1	182	3.208	4.603	.033	.025
	Supportive digital environment	6.640	1	182	6.640	16.171	.000	.082

Means in table 10 highlighted that the female teachers (M = 3.91) have better digital communication than male (M = 3.58) which means that female teachers have good digital communication skills than male. Also male have Supportive digital environment (M = 3.55) than female (M = 3.16).

Table 10. *Statistical Comparison between Gender and digital communication and Supportive digital environment*

Means	*gander*	*M*	*SD*	*N*
The digital communication	male	3.58	.091	71
	Female	3.91	.072	113
	Total			184
Supportive digital environment	male	3.55	.076	71
	Female	3.16	.060	113
	Total			184

Thirdly, to examine the relationship between Specialization and Digital technologies in teaching, Digital communication, Digital evaluation, and Supportive digital environment, the one–way MANOVA was conducted. The results of the MANOVA showed that there are no significant differences between Specialization and teachers' responses.

Furthermore, A MANOVA was conducted to investigate the differences between teacher experience and Digital technologies in teaching, Digital communication, Digital evaluation and Supportive digital environment. Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multicollinearity, with some violations noted. Levene's test for one variable scored less than .05 (see Table 11). Due to these violations, an adjusted alpha level of .0125 was used in accordance with Pallant (2007).

Table 11 . *Equality of Error Variances (3)*

Factors	*F*	*df1*	*df2*	*Sig.*
Digital technologies in teaching	.177	1	182	.674
Digital communication	.221		182	.639
Digital evaluation	.126	1	182	.723
Supportive digital environment	2.709	1	182	.102

In Table 12, the results of MANOVA concentrated that there were significant differences between the teacher experience and Digital technologies in teaching, Digital communication, Digital evaluation and Supportive digital environment (F (4, 179) = 3.862b, p = .005; Wilks' Lambda = .921; ŋ2 = .079).

Table 12 . *Multivariate Tests (4)*

Variable	Value	MultiF	Hypothesis df	Error df	Sig.	Partial Eta Squared
Wilks' Lambda	.921	3.862b	4.000	179	.005	.079

Table 13 clarified that there were significant differences between the teacher experience and Digital evaluation (F= 1, 5.515) = 8.060, p = .005, ŋ2 =.042).

Table 13 . *Relationship between Teacher Experience and the Axes*

Independent variable	Dependent variable	Type III Sum of squares	df	Error df	Mean square	UniF	Sig.	Partial eta squared
teacher experience	Digital technologies in teaching.	.563	1	182	.563	1.153	.284	.006
	Digital communication	1.420	1	182	1.420	2.357	.126	.013
	Digital evaluation	5.515	1	182	5.515	8.060	.005	.042
	Supportive digital environment	.999	1	182	.999	2.262	.134	.012

Table14 illustrated that the teacher experience who have more than 10 years (M = 3.66) were better than teachers who have 10 years or less experience (M = 3.30).

Table 14. *Statistical Comparison between Teacher Experience and Digital Evaluation*

Means	*Experience*	*M*	*SD*	*N*
Mean Digital evaluation	10 years or less	3.30	.079	71
	More than 10 years	3.66	.096	113
	Total			184

DISCUSSION

The present research focused on analyzing the levels of digital empowerment among male and female teachers in light of Saudi Arabia's vision"2030" and investigating the effect of (gender, specialization, and experience) variables on these levels. Results concluded that middle and high school teachers have a high level of digital empowerment and this result is consistent with the results of Dag and Oksal (2011) and Al-Hayeki and Al-Omari (2017), which demonstrated a high level of digital empowerment among teachers through applying the digital learning tools. The researchers attribute this result to the efforts of the Ministry of Education in raising the teachers' digital empowerment level to be reflected in their classroom performance. This is confirmed by Saricoban's (2013) study, which illustrated the importance of self-efficacy in teaching to achieve digital empowerment.

Concerning the results of axes, the current research demonstrated that both males and females have a high level of digital empowerment in the axis of technologies in teaching. This may be due to the large number of training courses held by the Ministry of Education during the COVID-19 pandemic, which focused mainly on empowering the teacher to use the Madrasati platform to maintain the continuity of distance learning to reduce educational loss among students of various school levels. Also, the Ministry of Education focuses on sustainable professional development in the field of e-learning for teachers (Saudi Ministry of Education, 2020b). This result coincides with the results of Khazali's study (2017), who stated the effectiveness of electronic training in developing the competencies of digital empowerment for teachers. This may also be attributed to the teacher's individual efforts to acquire digital technology skills in distance teaching through self-learning and refining their skills and this is consistent with what was reported by Tekin and Polat (2017), who concluded that there is a positive relationship between the teachers' levels of digital empowerment and strategies of searching for information on the internet.

Results confirmed also that teachers have the skills of digital communication to a large extent and this may be due to the widespread use of the Internet in the areas of communication in general and in the field of social communication in particular, which was reflected in the high level of digital empowerment of the teacher in this context. This result is in line with what was mentioned before in the General Authority for Statistics in the Kingdom. (The General Authority for Statistics in the Kingdom, 2017).

Furthermore, teachers have a high level in digital evaluation and this may be due to what they were trained on by the Ministry of Education during the implementation of the Future Gate project, which was one of the projects of the Tatweer Company of the Ministry of Education as a proactive and pioneering step to support the teacher in the application of e-learning (Future Gate, 2019).

The study also found that teachers have a high degree of digital empowerment in the axis of the supportive digital environment concerning the availability of all capabilities necessary to manage e-learning in the digital learning platforms of the Ministry of Education. This may be due to what the Ministry of Education has made to provide all the basic requirements for distance teaching in general and on the Madrasati platform in particular, as it has all the educational media in different forms (audio, visual, and audiovisual) to make it easier for the teacher to use it in distance teaching, as well as assuring the continuous updating of these media (Madrasati platform, 2020). It may be due to the teachers' training and continuous updating of all recent steps, as the Ministry of Education provided guidelines for use on its website as a reference at any time. (Saudi Ministry of Education 2020c). This is partly consistent with Al-Rehaily (2019) study, which concluded the importance of electronic support on developing digital empowerment among public education teachers in light of the quality standards of educational design. There is also a need for more specialized training and this is consistent with the study Abrams et al., (2019), which emphasized the significance of the continuous technological training of teachers and their role in raising the level of scientific readiness.

Research results found that there were statistically significant differences in the axis of digital communication due to the gender variable in favor of females, This is in line with the Moussa and Seraphim (2017) study, which found that women are able to take advantage of information and

communication technology to achieve greater effectiveness to expand their gains and roles in the fields of education and business. It also agreed with Doiron (2012) study, which showed that females have more in-depth experience with basic software applications that are largely used in education, while it differs with the results of Hilbert (2011) study, which concluded that men outperform females in using the Internet in education. The researchers attributed this result to the increasing the role of women and emphasizing their importance in the Kingdom of Saudi Arabia, and giving teachers a full opportunity to practice the educational tasks assigned to them, and their ability to invest this in developing one of their aspects of digital empowerment, which is digital communication.

There are also statistically significant differences in the axis of the supportive digital environment attributed to gender in favor of males. This can be explained by the fact that male schools have a good infrastructure in terms of providing Internet networks and internet networks may also be good in female schools, but they aspire to further development. Besides, schools, where male teachers work, may excel in providing any incentives to encourage the activation of e-learning. Also, it may be due to the fact that training courses for male teachers are widely held within the schools in which they work, in addition to attending courses held by the Ministry of Education. This is confirmed by the studies of Akkoyunlu and Yilmaz (2011) and Kingsley (2007), which confirmed the effectiveness of using some electronic applications that raise the level of digital empowerment among teachers. Moreover, the Kingdom's vision 2030 confirmed the necessity of developing and providing a supportive and stimulating school environment for teachers (Saudi Arabia Vision 2030, 2019)

Regarding the variable of experience, results found that there are statistically significant differences in the axis of the digital evaluation attributed to the number of years of teaching experience in favor of teachers who have more than 10 years of experience. This finding is consistent with the study of Kimm et al. (2020) and Lau and Sim (2008), which found that experienced teachers tend to incorporate technology in teaching more than novice teachers, while differs with Baek's et al. (2008) study revealing that experienced teachers were more resistant to integrating technology into their education. It also disagreed with Gorder's (2008) who stated that there is no statistically significant relationship between teaching experienced teachers and their technological competence. Therefore, the Ministry of Education should focus on teachers with less than 10 years of experience. The researchers attributed this result that teachers with more experience have experience in dealing with modern technology, unlike teachers with less than 10 years of experience.

The general framework for the suggested Proposal of the teachers' digital empowerment in light of the Kingdom's Vision 2030

Premises of the suggested proposal

Training teachers to provide them with the technological skills associated with teaching represents an important goal and focus of the professional development for teachers (Saudi Ministry of Education, 2020b) and also falls within the context of achieving the Kingdom's vision 2030. Moreover, the current suggestion is based on the current status resulting from the increasing number of students and the right of all the society members to obtain a distinguished educational service which will have a great impact on the society and the development of the elements of power in it, whether physical or human, in light of Knowledge-based Economy. Therefore, the Ministry of Education in the Kingdom of Saudi Arabia is interested in adopting the latest educational technologies (Saudi Ministry of Education, 2020d) to make the educational process available at any time and everywhere. Thus, the general framework of the proposed scenario depends mainly on the e-training of the teacher.

Categories served by the suggested proposal

The current proposal targeted middle and high school male and female teachers in the Kingdom of Saudi Arabia.

Requirements of the suggested proposal (technological requirements, human requirements)

The suggested proposal is based on electronic training and therefore needs many requirements, and among these requirements are clear plans that show how to integrate technology into all teaching-related processes according to the dimensions of digital empowerment and a specialized training platform that can be designed to train teachers remotely. Technical requirements include a technological infrastructure, powerful servers, course management software, study contents, calendar, and exams. There is also a need to provide the organizational and administrative requirements of the institution, with the provision of

modern management, and a qualified cadre that includes technology experts, and requires special training for trainers and teachers.

Training types and strategies

The two basic types of electronic training can be used in the suggested proposal. Simultaneous training in which the meeting between the trainer and the trainees takes place simultaneously at the same time via the Internet, and it achieves continuous interaction and achieving the advantages of training traditionally. Asynchronous training in which training materials that include video files and training content are uploaded on the internet and links can be sent to the trainees that facilitate sharing of information between them without the time and place restrictions imposed by regular or simultaneous electronic training. Several electronic training methods can also be used to achieve digital empowerment for the teacher, which include interactive electronic lecture, electronic demonstration, electronic practical experiment, electronic projects, electronic problem-solving groups, electronic discussion, and flipped classroom learning.

CONCLUSIONS

Digital empowerment according to the vision of the Kingdom of Saudi Arabia "2030" cannot be achieved only by the teacher or the learner, but also the educational institutions, headed by the Ministry of Education have a great responsibility. Therefore, the current study confirmed that middle and high school teachers have a high level of digital empowerment, and this indicates that the Ministry of Education had an important and influential role in achieving this level. Nevertheless, it still has many roles for raising this level through continuous training courses and moral and material incentives.

The decision-makers in the Ministry of Education in the Kingdom and those in charge of the digital transformation and professional development programs for the teacher can benefit from the results of the study and its comprehensive suggested proposal to achieve all dimensions of digital empowerment for the Saudi teacher to meet the vision of "2030" in general and regarding education in particular in order to support the development of teacher digital empowerment.

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