



RESEARCH ARTICLE

Aligning Electronic Curricula with Professional Development for Teachers

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ARTICLE INFO	ABSTRACT
<p>Received: May 16, 2024 Accepted: Jul 29, 2024</p>	<p>This study aimed to reveal the factors influencing the alignment of electronic curricula with the professional development of teachers. And learn about how to develop teachers' professional skills to effectively activate these electronic curricula. The researchers used the mixed research approach due to the topic and problem of the study. To achieve the objectives of the study, the researcher designed a questionnaire consisting of 23 items divided into two main axes, which was distributed electronically to a sample of 101 teachers of educational levels in the city of Riyadh. An interview with 15 teachers was divided into two axes. SPSS software was used for statistical analysis to calculate frequencies, percentages, arithmetic means, and standard deviations for each item of the questionnaire. The study reached many important results, the most important of which is the necessity of providing infrastructure in schools, including equipment, techniques, and devices that help the teacher use e-learning techniques. The study also found that most teachers are in dire need of training and professional qualification on using e-learning technologies. The study recommended the need to develop effective plans and programs to take advantage of the positive attitudes of teachers towards e-learning, and the need to develop training programs to raise the efficiency of teachers in</p> <p>Keywords: Electronic curricula, teacher professional development using digital and teaching skills.</p>
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INTRODUCTION

The development of technology led to in a new era of global education systems, of which e-learning has become an essential component. Advanced technologies play a critical role in creating the educational environment to promote integration and equality. This transformation requires a comprehensive rethink and modification of courses to capture the potential of emerging approaches; to match the difficulties and opportunities given by these technologies. Nowadays, teaching approaches employ a number of platforms and tools to speed the distribution of instructional materials and foster contact between educators and students. These include learning management systems (LMS), educational apps, multimedia resources, and virtual and augmented reality platforms such as Moodle and Blackboard.

Access to wonderful educational tools across a wide range of fields has become more diverse internationally because to the growth of online learning platforms like Khan Academy, Coursera, and Odemi-Udemy. Several studies, like the Assiri Study (2022) that used the platform My

School as a study is perfect, - Al-Maamari and Al-Ghafiri (2022) pointed to the importance of educational platforms in helping instructors and students alike increase their digital literacy. This study focused on raising awareness of the value of e-learning platforms and their role in the evolution of the educational process, keeping up with developments in technology and science, and providing training and awareness when employing these methods in the educational process or dealing with them.

As a result, the Saudi Ministry of Education is trying to modernize its teaching approaches to correspond with these actions and improvements. The overview of the My School E-platform, a complete answer to the expanding demands of E-learning, is a noteworthy initiative. This platform is more than just a collection of educational incomes; it wants to offer a thorough educational experience that satisfies the various demands of teachers and students and includes resources that follow the authorized school curriculum. This action is a component of a plan that aims to provide Saudi Arabian teachers with ongoing professional development opportunities and excellent education. Globalization has significantly impacted school curricula, as demonstrated by a 2008 study by conservatives and others. This has resulted in a move away from paper resources.

Samadi et al. (2016) observed that throughout their research for the Master's Curriculum Program and instructional techniques at Tabuk University, students were unable to use multimedia strategies and e-learning.

The concept of coordinating the use of electronic curricula with an improvement of teachers' professional abilities emerged since, despite advancements in pedagogy, government schools still hardly use electronic curricula. It is now crucial to address this issue in order to advance education as well as to meet the demands of the fourth industrial revolution and the 21st century's skill requirements. Technical advancements and high-quality education are also at stake.

The problem of the study

The availability of courses across the web, which include digital textbooks, e-learning courses, and various digital platforms, has many advantages and benefits such as enhancing flexibility and adaptability and providing personal learning experiences. Their integration into educational frameworks has become crucial in an era of evolving technology and an increasingly digital landscape.

According to its three models—inquiring minds (UK), new fundamentals (Australia), and seeking to learn (Q2L) (North America)—Loveless & Williamso (2017) identify the emergence of new digital progressivism approaches. These models are distinguished by a focus on learning, interactive human-computer systems, problem-oriented content, and timely learning support. They view the school as a component of a larger, integrated, survey-based, inquiry-based network system that promotes and strengthens learning communities and regards students as analysts and critical thinkers. It should be mentioned that the Q2L paradigm encourages critical and inclusive thinking, which can result in the development of implicit strategies that motivate and promote engagement in online learning.

The National Center for E-Learning's e-learning standards were applied by the Saudi Ministry of Education in response to these advanced educational models, and new e-curricula were introduced through the "My School" platform in the academic year 1443H. These standards were followed in regards to design, interaction, equity, accessibility, measurement, and evaluation.

Tawerki (2022) observed that certain schools had trouble providing students with access to e-learning materials, and that there was little contact between the teachers and students over the educational materials themselves. Furthermore, UNESCO's Education Monitoring Report 2023 highlighted how mobile devices might distract students from their studies and mentioned that fewer

than 25% of nations forbid their usage in classrooms. The study's findings indicate that the reasons behind the inefficient usage of electronic curriculum in the classroom were not addressed.

In light of these findings, it is critical to comprehend the inconsistencies, difficulties, and opportunities associated with integrating e-curricula with teacher professional development. In addition to improving the educational process, resolving these problems is essential to guaranteeing that e-curricula investments produce the intended learning results.

The current research aimed at answering the following questions:

- What factors influence the relationship between teachers' professional development and electronic curricula?
- What professional development opportunities are there for instructors to use these e-curricula effectively?

The objectives the study:

The present investigation aims to accomplish the subsequent goals:

1. Determine what factors affect how electronic curricula relate to the professional development of teachers.
2. Acquire knowledge about the methods used for professional development of teachers; to efficiently initiate these online courses.

Significance of the study

The study's significance lies in its emphasis on the requirement of matching e-curricula to the professional demands of teachers.

1. This approach enhances both the educational experience of students and the quality of education.
2. In the era of the digital transformation, the study facilitates teachers' adoption modern methods, improving the quality of instruction.
3. By emphasizing the integration of electronic curriculum and teachers' professional development, the study advances innovation in educational practices.
4. This study promotes increased investment in digital material and may be helpful to experts in electronic curriculum creation as well as the Center for Curriculum creation in Ministries of Education.
5. Members of the National Center for Educational Professional Development can use this research to extend their e-curricula training programs.
6. Some training platforms that collaborate with the National Center for E-Learning and the Ministry of Education may profit from this study.
7. This study helps to enhancing the knowledge and practical application of educational supervisors; to be activated in professional learning communities.
8. Research technical teachers can benefit greatly from this study's knowledge and process enhancement, which will aid in the development and training of educators working with electronic curricula.

Delimitations of the study:

The following limits were applied to the study:

1. Substantive limitations: The study's scope is restricted to investigating how instructors' professional development and electronic curriculum align.
2. Duration: 2023 academic year/1445H.
3. The place : Riyadh City

4. Human limits: A Riyadh teacher's class.

Terminology

E-curriculum

According to Hadada (2019), this is a collection of scientific and educational knowledge that is made available to students by the vast opportunities that information and communication technology presents.

Procedural definition: interactive multimedia course material developed around the concepts of constructive learning.

LITERATURE REVIEW

E-course concept and teacher's role

Course Electronic refers to a wide range of educational activities and services that use computers. According to Younis (2016), developing a course requires teachers to consider several techniques such as setting learning goals, organizing electronic responsibilities and conversations, and selecting acceptable teaching methods.

Teachers are in charge of selecting resources, tools, gadgets, and procedures to support the learning process, developing cognitive approaches to improve knowledge, presenting compelling content, designing evaluation tests, and implementing quick feedback mechanisms. Represents the enlarged role the movement of teachers in the digital age from traditional schooling to professions with the highest pays, including Choosing and creating instructional activities that demand a thorough understanding of teaching methods Advanced Teaching Methods

A more precise description of an electronic course was given to me by Le et al. (2010:117), who stated that it is a computer-based course that is equivalent to a traditional study unit or the subject matter covered in that unit. Under this concept, all aspects of teaching and learning are done via the internet, enhanced by different multimedia elements and utilizing the system's resources. This view positions e-curricula as essential tools in contemporary education and highlights their innovative and varied nature. However, a number of crucial elements related to their implementation or design determine their efficacy and success.

These factors are numerous and include everything from a thorough analysis of the needs of teachers to taking into account the user interface of educational platforms, organizing educational content, utilizing interactive hardware and software techniques, establishing reliable systems for assessment and feedback, guaranteeing technical support, and upholding adaptability, flexibility, and ease of use. The subtle cultural differences between teachers and students must be taken into consideration when integrating these components in a way that complements teachers' professional development practices.

Abu al-Sameh and Rahal (1433) introduce the idea of the "computerized school" and advocate for a thorough overhaul of the educational setting in order to become tech-savvy. The following are necessary for the school to be computerized:

- Computerizing textbooks and curricula; adopting e-learning.
- Encouraging instructors to enhance their skills in using technology and information sources.
- Transforming the school into a technological setting adept at handling computer technologies and gifts.

Particularly with the digitization of textbooks and curriculum, this change entails a change in the role of instructors from traditional knowledge carriers to technically proficient users and knowledge

providers. More dynamic and participatory learning opportunities are made possible by this change, which redefines the school as a hub for knowledge access as well as a location for learning.

Building on the significance of e-learning in curriculum development, it is possible to close the gap between traditional education and the state of information technology today. This allows e-learning to be successfully integrated with the traditional education system, offering a thorough educational experience. Provided this, the instructor can use the "My School" platform's e-course in addition to the customary interactive lessons and assimilation. By incorporating the lesson into the school timetable as a prelude to a regular lesson and implementing it in the classroom.

That vision states that in order for a teacher to remain relevant in the digital age, he or she must cultivate an intellectual viewpoint that persuades them of the necessity of updating conventional teaching techniques to keep up with the rapid advancements in cognitive and technical skills. Because of its function as a guide, motivator, and intermediary in the educational process, it should be knowledgeable about cutting edge pedagogy and practical tactics. It must also have the best e-learning setup possible. Teachers can use both the electronic and traditional curricula to improve their understanding of today's applications. They can also administer a survey to students to find out how satisfied they are with each curriculum. This method aids in demonstrating the significance of integrating e-curricula into the classroom.

It is the responsibility of educators to choose instructional resources, equipment, and techniques that facilitate learning. To create cognitive strategies that improve understanding and to create visually appealing content presentations; to create assessments; and to put in place prompt feedback systems. This enflamed role indicates teachers' shift in the digital era from traditional teaching to a more inclusive one, which includes the selection and creation of informative activities and necessitates a thorough understanding of advanced educational approaches and methodologies.

Importance of technology integration in school curricula

Studies conducted in this field focus how electronic courses have a innovative effect on education. The Hanm Mouafi Study (2019), for instance, demonstrates how electronic courses are changed from their traditional patterns into a collaborative environment that supports the ideas of lifelong learning and self-learning. This change also makes it easier for teachers and students to collaborate and engage more effectively, which expands the options for instructional strategies.

The Massachusetts Institute of Technology (MIT) initiative from 2001 is a famous example of technical integration in education, as reported by Knowledge Magazine (2015). MIT made all of its course substances freely available via the Web in an unprecedented move that changed the course from educational information dissemination. The Institute's website features over 2000 teaching courses, draws in undergraduate and graduate students, offers study plans and lectures in text, video, reference, and assessment methodologies, and receives over 1 million monthly visitors from around the world.

Jordan had undertaken an initiative to digitize some class curricula within the framework of the Arab States. The success of the initiative, according to experts is hinged on overcoming challenges like a lack of technical support and skilled labor. Digital curricula can act as extra assets for teachers and assist make up for classrooms lost to student absences. It's crucial to understand that digital books are advancements that benefit the educational community rather than an equivalent for traditional classroom materials. Underdeveloped e-learning settings, a lack of experience among teachers, and opposition to change are examples of potential problems. Therefore, in order to determine the advantages and disadvantages of digital approaches, actual experiences and evaluations are crucial.

The concept and significance of professional development for educators:

The processes by which instructors learn, improve, and hone their teaching abilities, competencies, and knowledge is included in their professional development. Numerous activities, such as workshops, seminars, academic conferences, online courses, mentoring programs, cooperative education initiatives, and meditation techniques, are indicative of this development path. Increasing teachers' efficacy and efficiency in their teaching duties is the overarching goal of professional development in the educational setting. Professional development, by providing instructors with advanced educational skills and information, will directly contribute to enriching students' learning experiences and the general growth of education. This recurrent professional development process ensures that teachers continue up to date on the newest educational trends, techniques, and technological advancements, boosting their capacity to adapt to students' moving needs as well as the overall evolving educational scene.

A vital component of improving the quality of education and streamlining the learning process is teacher professional development. Enhancing teachers' efficacy and mounting their professional and academic abilities requires this approach, which is invaluable. Professional development might take the form of self-directed learning routes or organized, accredited training programs. According to Al-Anzi (2021), becoming a teacher is a constant process that reflects the dynamic nature of the education sector; it should not be seen as a definitive step that can be reached with an academic degree or occupational certificate. In order to stay up to date with the latest progresses in educational approaches and maintain their relevance, effectiveness, and compatibility with the different and ever-evolving requirements of their pupils, teachers must engage in continual professional growth. To put it briefly, in an ever-changing environment, teachers must remain loyal to ongoing professional development if they are to sustain and improve the caliber and efficacy of education.

E-professional development goals for teachers

Teachers' proficient development is becoming more and more important in an era of rapid technological expansion and complex educational paradigms. In order to provide tutors with the abilities and information required to successfully navigate the intricate details of modern teaching contexts, digital professional development is a calculated reaction to these developments. Al-Rashidi (2020) lays out a number of significant goals for this type of professional development, each of which is intended to address a particular facet of effective teaching in the digital era. These aims were created to support the development of a more active, adaptable, and technologically integrated learning environment in addition to improving the competencies of separate teachers. Among them are:

- Enhance the instructor's capacity for self-evaluation and enhance additional assessment competencies.
- Developing a state-of-the-art learning environment that is essential to tackling educational issues and present scientific services to the public.
- Increase the instructor's capacity to use research resources to gather data.
- Helping the instructor use modern technologies into the teaching process.
- Agreement and complementarity between the educational theory and applied components.
- Emphasize self-learning methods and encourage lifelong learning.
- Giving the instructor the capability to understand and use the newest theories of teaching and learning.

The value of E-professional development for teachers:

Current research, including studies by Mantella (2006) and Gebara (2010), has emphasized the critical significance of e-professional development in teacher education. These studies establish the

efficacy of e-training packages in improving instructors' educational skills. This study places a strong emphasis on the implication of electronic course management systems as critical instruments for teacher management and professional skill development. Integrating e-learning into professional development advantages would definitely give numerous benefits, hence increasing the effectiveness of these programs. One of the essential factors discovered in these studies is the strategic creation of E-professional development programs that are tailored to the individual goals and needs of instructors. This careful preparation is critical to ensuring that the professional development carried is closely matched with the educational area's unique requirements and changing dynamics. Accordingly, Ali (2019) defines a set of digital competences as critical for teachers in the digital age.

These skills include website design and development skills, as well as the ability for teachers to set up and manage instructional websites. Facilitating self-learning improving teachers' ability to guide pupils toward self-directed learning. Integrating technical tools into education; developing instructors' ability to excellently integrate technology into educational processes. Effective use of electronic decisions is improving efficiency in the distribution and management of electronic courses to improve teaching and learning procedures.

Challenges of implementing e-professional development for teachers:

Several studies discovered challenges in establishing e-professional development for instructors. Al-Bandari and Ta'ah's (2004) research emphasizes numerous significant difficulties:

1. Obstacles to new teaching methods: A public issue is teachers' lack of motivation to accept new teaching methodology, with the tendency to stick to conventional curricula.
2. Some educators are uncertain to implement instructional reforms due to personal interests or concerns about troublesome current practices.
3. Vanity of existing training programs: Lecture and workshop-based programs were discovered to be unsuccessful.
4. Admission to data and statistics. According to studies, existing databases are unsatisfactory, making it difficult to acquire critical information and statistics.
5. Short infrastructure: There is a substantial lack of infrastructure to undertake comprehensive e-rehabilitation programs.
6. Determined convenience of expertise for developing successful online training programs.

Previous studies

Forster (2014) describes a pilot program including e-textbooks at Coventry University in Anglitrar. The difficulties of switching from traditional to digital media were brought to light by this study, which also revealed that students preferred printed courses. Although less than 9% of respondents answered the questionnaire, 86% of them indicated that they preferred printed copies even though they had access to electronic versions. This choice can result from a lack of prior exposure to electronic reading materials; this shows that students need to get more accustomed to using digital learning resources.

Ahmed's 2019 study on the e-learning project using the e-curriculum within the Sheikh Mohammed bin Rashid Smart Learning Initiative exposed a number of issues that smart learning projects initially encountered, particularly when utilizing the curriculum's digital content. These issues included marketing issues and issues with the project's structured implementation. Of the overall student sample, 298 students (38%), affirmed that teachers play a substantial role in encouraging their usage, 343% that teachers play a role to some level, and 139% that teachers play no part at all in their effective use.

In order to gather information on how South African math teachers teach and handle the subject, Stols et al. (2015) conducted a study on the subject. The study sample included 22 teachers and was

designed to follow both the quantitative and qualitative curriculum. A questionnaire was created to gauge the teachers' level of need for web-based training. In the end result, they underlined the necessity of improving teacher preparation for using technology in the classroom. The study also found that teachers were unsure about how to use technology in the classroom; Researchers observed that teachers were reluctant to employ technology in the classroom because they lacked the necessary skills to deal with the situation.

In a similar vein, Castillo and Guadalupe (2018) note that instructors in the Mexican state of Zacatecas lack digital competences and skill, which makes it difficult to integrate ICT into the school infrastructure.

Similar difficulties with infrastructure, resources, training, organization, and curricula are emphasized in Extremadura, Spain, in the Barantes et al. (2011) study.

The Sánchez Study (2018) in the Mexican state of Puebla found that depending on the teacher's degree of training, ICT use in the classroom was usually specific, optional, and unplanned. ICT use is independently, but there are several barriers, including those related to working circumstances and training.

The analytical descriptive curriculum was employed in the Yami (2020) project, which attempted to understand 21st century digital teaching skills by the administration of a questionnaire to a sample of headteachers and teachers. 174 headteachers and 189 teachers made up the descriptive study sample. The findings showed that teachers' awareness of digital teaching techniques was mediocre and that there was a clear need for supportive training programs.

The Shisha study (2021) found that Saudi school instructors might use my school platform, but it also inveterate that its utilization was inadequate and needed to be improved. Transformation issues are a common issue, the study, which combined quantitative and qualitative methodologies, discovered.

Some studies, like those by Ahmed (2019), and Forster (2014), and others on e-education, like the Shisha study (2021), concentrate on electronic approaches to smart learning and e-books. Other studies address science and technical learning, like the Yami (2020) study and the Barantis Barrantes et al. (2011) study. While there is some research on ICT integration in education, we found the Sanchez Study (2018), Barantes et al. (2011), Stols, Stols, et al. (2015), and Castillo and Guadalupe (2018).

Barrantes et al., 2011; Forster, 2014; Stols, 2015; Castillo & Guadalupe, 2018; Sánchez, 2018; Ahmed, 2019; Yami, 2020; Shisha, 2021) and the current study have different objectives.

The present study also supported on an alternative methodology with earlier research, including: (Shisha,2021; Sánchez, 2018) However, they disagreed with studies that utilized the descriptive curriculum (Barbantes et al., 2011; Forster, 2014; Stols, 2015; Ahmed, 2019; Yami, 2020) and the qualitative curriculum (Castillo & Guadalupe, 2018).

Regarding the sample utilized to target teachers, the current study likewise reached a consensus. Barrantes et al. (2011), Stols (2015), Castillo & Guadalupe (2018), Sánchez (2018), Yami (2020), and Shisha (2021) have both been studied. However, they differed in the sample they utilized to target students who had both: Ahmed, 2019; Forster, 2014).

To obtain the most of the researchers' knowledge, this study is the first to examine the variables that educators believe affect how well electronic curricula complement their professional development. They were more thorough, particularly in terms of helping instructors hone their professional abilities so they can use e-curricula more successfully. This is an area where the majority of research fell short.

Responses to earlier research:

1. Availability of several studies, which will enlighten certain areas of the study.
2. Applying and having access to resources and curriculum in this type of study helps to formulate the research tool.
3. Determine the areas that researchers have examined, and utilize those areas to inform some of this research's methodology.

THE PROCEDURES OF THE STUDY

In order to do a thorough evaluation of how the electronic curriculum is in line with the professional development of teachers in Riyadh, the study made use of both the quantitative and qualitative curricula.

Sample of the study: All of Riyadh City's instructors make up the research sample. According to data from the Planning and Development Management Center of the General Directorate of Education in Riyadh Region, there were 23,251 teachers working in Riyadh City overall. 101 government school instructors from a range of educational backgrounds in Riyadh were chosen as a sample. A more intimate and targeted group of fifteen teachers was included in the qualitative aspect of the study in addition to the quantitative sample. The participants in this high-quality sample had varying specializations and levels of teaching experience, indicating equal variation.

Results of the study

These results show that instructors who took part in the study clearly understood the need for flexible, responsive, and easy-to-use electronic curriculum that was incorporated into the larger educational system. The findings highlight the value of consistent training as well as the necessity of curriculum improvement in tandem with advancements in technology and education. The widespread acceptance about these elements emphasizes how crucial they are to teachers' professional growth when used in conjunction with e-curricula. Elements that have an impact on how well the electronic curriculum and teacher professional development align.

Factors affecting the harmonization of electronic curricula with the professional development of the teacher

The integration of electronic curriculum with teacher professional development is influenced by a number of important aspects. A suitable work environment for teachers, systematic training and development of teachers in technical abilities, the establishment of a supportive structure within schools to facilitate teachers' development, and the need for comprehensive technical training for teachers are some of these factors. Other factors include the need for adequate equipment in schools to support the application of the electronic curriculum. These outcomes line up with the investigation of both: (2011) Barrantes et al.; Ahmed (2009); Castillo & Guadalupe (2018); Sánchez (2018).

Additionally, the study (2015 Stols et al.,) highlights these concepts by emphasizing the necessity of improved technology training, filling in the gaps in teachers' proficiency, and ensuring efficient tool management.

Developing teachers' professional skills for effective use of electronic curricula

Figure 6 displays data on various ways for improving teachers' skills in the successful use of electronic curriculum. These include: hosting concentrated workshops and intense training courses on current technologies and incorporating them into teaching assets; training instructors in the usage and optimization of varied educational platforms; Regular review of the success of vocational development programs to ensure that they are suitable with instructors' needs. To organize discussion groups for instructors to share experiences and best practices, provide the availability of the appropriate devices and programs, and ongoing technical support skills to ensure continual

improvement in teaching methods, encourage self-assessment among teachers and include student input, offering opportunities for actual application of skills learned during training. Encourage innovative thinking and adopt new tactics tailored to e-curricula to boost self-directed learning and explore extra educational resources. Provide psychological support to teachers to develop a culture of experimental learning and remove fears about the use of technology. Implementation of material and moral incentives to encourage teachers to include electronic curricula into their instruction. Some of these tactics are consistent with the findings of my study (Yami, 2020; Shisha, 2021), which found similar criteria as crucial in strengthening instructors' ability to engage the electronic curriculum.

The qualitative component involves analyzing responses from personal interviews.

First, consider the variables that influence how electronic courses are integrated into teachers' professional development. Participants identified a number of obstacles in aligning e-curricula with teachers' professional development. These include limited infrastructural support in schools (particularly access to the internet), technical challenges, a lack of motivation for self-directed learning, a scarcity of key classroom technical tools, and a lack of hardware. Other challenges include vast digital content without proper Internet support, insufficient classroom equipment, time limits, and the need to improve technological skills within the educational environment, not to mention Internet access in many schools.

Reviewing current career development programming: A majority of participants reported that present career growth programs did not suit their individual needs for using electronic curriculum. This weakness is related to lack of sufficient technical resources, inadequate comprehensive training courses and absence of curricula created for e-teaching approaches.

The participants identified several critical variables for developing professional abilities in the usage of the electronic curriculum. This includes collecting technical skills through targeted training, improving teachers' abilities to use electronic curriculum to improve educational quality and learning outcomes, and assuring that relevant equipment is available in schools. Additional factors mentioned included the availability of school infrastructure to help instructors build their skills in using electronic curricula, intense technical training, and the gaining of technical knowledge through hands-on experience and technical-focused training programs.

Second : basic skills for successful use of electronic courses.

Participants highlighted a number of key abilities for the effective use of e-curricula. This competency comprises technical knowledge, which is frequently acquired through self-learning and formal training. The core abilities listed are:

- Enhance technical skills through self-education procedures.
- An extensive knowledge of learning technologies and e-learning methods.
- Computer efficiency.
- Access to necessary resources through educational and government channels.
- Thorough knowledge of technology; obtained through formal training programs.
- Improving technical abilities through experimentation and practical application.

Review of traditional teaching methods for electronic curricula

Participants agreed that traditional teaching approaches for electronic syllabus should be examined and modernized for effective integration. This change is deemed required in order to meet the requirements and capabilities of digital education.

Methods and tools for professional development using the electronic curriculum:

Study participants suggested many techniques and tools for career growth in the context of electronic courses. These include specialized technical courses and teacher training programs to integrate technology into teaching.

- Take use of virtual classes, blogs, and other learning resources.
- Enroll in technical training programs.
- Access to the proper technological equipment, such as computers, Internet access, projectors, and other supporting technology.
- Participation in a wide range of technical education and training courses.

The results obtained shed light on the skill sets and training approaches that teachers believe are crucial for the efficient use of electronic curriculum. They underline the need of developing educational abilities and adapting to the digital world.

CONCLUSIONS AND SUGGESTIONS

In brief, a cooperative and integrative strategy is necessary for the successful alignment of computerized courses with ongoing teacher professional development. The coordinated efforts of numerous stakeholders, including curriculum designers, educators, and educational management organizations, are necessary to reach this consensus.

For the purpose of developing an interconnected and successful digital learning environment, communication between these groups is essential. Electronic material must be pedagogically solid and flexible enough to meet the changing demands of educators and learners, according to curriculum designers. Instructors are essential to the execution of these curricula; therefore, they need ongoing professional development. Departments and agencies in charge of education must also provide the resources, framework for policies, and infrastructure required to make this kind of integration possible. Consequently, in order to match e-curricula with teachers' professional development, an integrated and cooperative effort is required; this will eventually result in an educational ecosystem that is more dynamic and productive.

Suggestions: Based on previous research

1. Improving professional development opportunities: Teachers' vocational training programs should be widened, with an emphasis on e-curricula.
2. Provide technological help in learning settings. It is important that schools have suitable technical support systems in place to help instructors adjust to and get past the technological difficulties posed by e-curricula.
3. Including e-curricula in current curricula: It is important to emphasize the value of e-curricula in teaching approaches for modern learning trends like reversed class models and integrated learning.
4. Expanding professional development opportunities: More teacher vocational training programs are required, with an emphasis on e-curricula utilization.
5. Provide technological support in learning settings. It is important that schools have sufficient technical support systems in place to help instructors adjust to and get past the technological difficulties posed by e-curricula.
6. Teachers' digital literacy: It is necessary to emphasize the significance of digital literacy. Teachers must be well-versed in the opportunities and difficulties presented by the digital environment.
7. Including e-curricula in current curricula: It is important to emphasize the value of e-curricula in teaching approaches for modern learning trends like reversed class models and integrated learning.

8. Promote creativity in the creation of digital content: Teachers should be given the tools and support they need to produce innovative digital learning materials that address particular, tangible student needs.
9. Activating on e-curriculum in classrooms: To improve student learning, a concentrated effort should be made to include e-curriculum, including common lesson formats, into platforms like My School.
10. Strengthening and developing school infrastructure: To facilitate the implementation of e-curricula, school infrastructure development is crucial. This includes the creation and upkeep of computer laboratories.
11. Continuous assessment and updating of e-curricula: To guarantee that technological advancements and best teaching practices are maintained current, e-curricula need to be regularly reviewed and evaluated.
12. Creating collaborative learning communities: Encourage teacher networks to exchange creative ideas, best practices, and insights regarding the use of electronic curricula.
13. Including real-world applications in e-curricula: Including realistic and useful situations and applications in e-curricula would increase students' engagement and sense of relevance.
14. In order to enhance the e-curriculum, it is imperative to facilitate teachers' access to a vast array of digital materials, such as open educational resources.
15. Creating alliances with technology suppliers: establishing alliances with tech firms and educational technology suppliers to gain access to cutting-edge resources and tools for electronic curriculum.

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