Research Article

e-Curriculum as Perceived by Teachers: Jordan as an Example

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Information technology affects all sectors; its impact on education is inevitable. It was capitalized by the COVID-19 pandemic. An evaluation of instructional materials accessed by students is an urge. As such, this study evaluated the appropriateness of the English e-curriculum from the perspective of the teachers. The study population consisted of all the teachers who teach the English language in Jordan. The sample consisted of 500 teachers who responded. An online questionnaire with a five-point Likert scale was prepared, ranging from 1 (strongly disagree) to 5 (strongly agree), including 65 items; reliability and validity were proved. The results revealed that all dimensions were in the medium degree. In the first rank came "Electronic Assessment," which reflected medium perception. In the second rank came the field of "Content." "The Use of Technological Teaching Aids" field came in the penultimate rank. The total evaluation of the six domains was medium. The results indicated that teachers are almost satisfied with the e-curriculum. The field of "Objectives" came at the last rank. This showed that teachers' evaluation of objectives got a low degree of evaluation. Most of the items within this domain got a low degree of evaluation. It was recommended to focus more on achieving concord between the tools, strategies, and learning objectives and amending the English e-curriculum by increasing strengths, avoiding lapses, and adding more tasks that meet students' levels to achieve differentiated instruction. Providing teachers with updated technological tools can help them achieve more interaction among students, including teacher's guide books.

1. Introduction

In recent years, information and communication technologies (ICTs) have contributed much to science and technology, especially education. The emergence of technology has led to changes in the information communication process, transforming education radically. Not only have the education sector been affected, but also all sectors worldwide were also touched. The development in education has led to the emergence of new terms, such as lifelong learning and "learning how to learn," resulting from information technologies. The backbones of the approaches to curriculum are digital learning, online learning, active learning, computer-based learning, and distance education [1, 2]. Consequently, curriculum development is studied concerning information technologies.

The COVID-19 pandemic has created an enormous change in the education system in the history of education in Jordan, affecting the way of delivering the materials. It has stimulated change within the education sector [3, 4], by various means such as platforms and television support education. Distance learning was developed because of the quick responses by governments and partners worldwide supporting education continuity. It has become a mainstream form of education that enables the environment to access learning. It has developed and extended rapidly. Recently, it has been reported that distance education has become more common and mainstream [5, 6].

The curriculum is the main component of the education process, which teachers rely on to equip students with skills, knowledge, and attitudes [7, 8]. The curriculum is organized to improve student learning and facilitate teaching. The main components of the curriculum are goals, methods, materials, and assessments to assist the learning and teaching process [9].

The sector of the education community showed the critical role of technology in improving education, mainly when it adds value [10–13]. Numerous studies showed that practical use of ICT with adding value could improve educational quality and link learning to real life [14–16]. McMahon's study [17] showed that the environment could enhance students' higher-order critical thinking skills when using ICT. Koc [18] pointed out that students can collaborate anytime and anywhere using ICT. As a result, learning can occur. Online materials can be available the whole day. ICT can transform a teaching environment into a learner-centered one [19].

Implementing ICT saves time and money and makes knowledge acquisition more straightforward and accessible [20]. ICT makes access to education. This requires more curriculum objectives, encouraging and motivating students, well-trained teachers using ICT, and providing appropriate education [21]. Greenhow et al. [22] mentioned the vision of 21st-century competencies that contains multimedia work, stating that it is expected that teachers have such competencies. Most educational institutions currently realize the importance of technology in education, so they adopted online education because of its effectiveness.

Recently, several indicators have shown that the growth of online education is the necessity of this teaching approach for the educational institutions as a long-term strategy [6, 23]. Nearly 70 percent of educational institutions stated that online learning was essential to their long-term plans in 2003. Notably, there was an increase in enrollment numbers in online courses, which was about 6.7 million from 2 million in 2003. In 2003, this growth became continuous; it exceeded organizational planners' expectations. In other words, over 90% of colleges students are enrolled in one online course [24].

During COVID-19, high growth in online education and its remarkable rise have been noticed. Globally, education investments cost US$18.66 billion in 2019, whereas online education will cost almost $350 billion by 2025 (World Economic Forum, Li and Lilani [25]). Consequently, educational materials are uploaded on websites, available as soft copies, and digital materials become the standard for all classrooms [12, 26]. As a result, several online learning platforms offer free access to their services, including platforms such as "Dark," where the Ministry of Education in Jordan published educational materials to ensure educational continuity. It has also provided digital textbooks and lessons to achieve learning distance and e-curriculum. Digital materials can range from simple PDF conversions of print materials to carefully designed Web-based curricula, television lessons, and platforms.

Improving and evaluating the curriculum are needed to achieve educational goals and a successful learning process [27]. Therefore, researchers and educators confirmed the importance of the curriculum evaluation to determine the strengths and weaknesses of the curriculum for developing it [8]. The curriculum evaluation is defined as a systematic analysis of all information related to the curriculum to improve the curriculum and recognize whether it is effective [28]. Evaluation is also defined as providing descriptive information to recognize the strengths and weaknesses of vision, outcomes, methods, and design to improve what is evaluated [29]. This consequently helps to amend the curriculum based on the evaluation results.

Teachers are one of the main essential parties to benefit from their views (Eisner [30]). Based on the teacher's perspective, online learning and teaching can be challenging and enjoyable simultaneously. This requires teachers to use Moodle, an online learning platform, to deal with various types of multimedia, and it is not easy for them to transfer written material to the online environment. It is essential to take teachers' views of e-curriculum to determine the weaknesses and strengths and build on the results to achieve curriculum improvement [31].

Teachers' attitudes toward distance learning are crucial as they are the main factor in learning activities [32]. Teachers' attitudes toward technology affect learners' perceptions [33]. Learners consider teachers as role models for them, and they are affected by teachers' behaviors by observing their actions and emotional reactions toward technology, and consequently, this affects their achievements [34, 35].

This requires us to consider teachers' view of e-curriculum evaluation; it is an essential point because their attitudes influence learners' achievement rigorously. Olson [36]; Webster and Hackley [37]; and Dillon and Gunawardena [38] confirmed that teachers' views of online learning should be taken into consideration through online learning or distance education to recognize e-curriculum users' behaviors effectively and totally. Teachers' attitudes toward online learning rigorously influence learners' online learning and satisfaction. This means that teachers with a negative attitude toward e-curriculum or distance teaching lead to students with low satisfaction with it [39, 40]. Three main features have an impact on the learning process. These are teaching style, views of technology, and control of the technology [36, 41]. Most importantly, teachers should be capable of using technology to be able to solve any encountered technical problem during the course. In sum, teachers' attitudes are crucial to evaluate e-curriculum or any program.

To achieve curriculum development, information needs to be collected to make judgments and decisions about all aspects of curriculum activities, from planning to implementation. Most evaluation models were created in the 40s, 50s, and 60s. There are the four models: Zais model, Tyler's objective model, Stake's responsive model, Stufflebeam's CIPP model, and Scriven's goal-free model, which have been developed and widely applied in educational evaluation in general and educational program evaluation in particular.

In particular, Tyler [42] emphasized that curriculum improvement requires the following points: choosing learning experience, setting educational purposes, and organizing learning experiences and evaluation. Tyler's model includes three steps; the instructional objectives are specified; the performance data are collected. The final one is to compare the performance data with the objectives specified.

The second is Stake's responsive model, which focuses on the stakeholders' views and interests, which are taken while

communicating and contacting them continuously during the evaluation [43]. The third model is Scriven's goal-free one that emphasizes the outcomes of the educational program. It emphasized the results achieved by the designers' educational programs [44].

The fourth model is the context, input, process, and product (CIPP) model, developed by Daniel Stufflebeam in the late 1960s. The CIPP model focuses on four areas: input evaluation, product evaluation, process evaluation, and context evaluation [29, 45]. The fifth is the Zais model for curriculum evaluation, which has four components: evaluation, objectives, materials or content, and learning activities. It requires a thorough understanding and implementation of curriculum design in an educational institution. Zais [46] defines the design of the curriculum as an organization of the curriculum elements, which are aims, goals, objectives, content, learning activities, and evaluation. He confirmed that the pattern of content organization is the most distinguished element of curriculum design. It is nearly similar to Tyler's model, and it is considered simple, inclusive, and transparent. Therefore, the researchers adopted this model to evaluate the recent e-curriculum by adding technology to the main domains of the Zais model.

Briefly, the evaluation process is an effective way to ensure the quality of education and the validity of the curriculum in general and e-curriculum in particular, which leads to development. Additionally, it is a way to promote innovation in the e-curriculum. It should be clear that e-curriculum evaluation provides educational leaders and policymakers with accurate vital information and procedures about the effectiveness for one of the main elements of the educational process to make decisions and determine strategies that lead to the improvement of curriculum.

Currently, the educational sector emphasizes the importance of technology, which has become its top priority. Therefore, all countries worldwide in general and Jordan in particular have shifted to distance learning because of COVID-19 pandemic. This is because we desperately need online learning to achieve and ensure the continuity of education. Consequently, we have shifted to an e-curriculum. This development in education needs to be evaluated to ensure the quality of education that we seek to achieve.

To the best of researchers' knowledge, the e-curriculum of the English language has not yet been evaluated to determine the extent of its appropriateness and contribution to achieving the desired teaching and efficiency goals. Therefore, researchers decided to conduct this study to investigate teachers' perspectives about the English e-curriculum, evaluate its appropriateness based on teachers' views by showing its merits and promoting them, and determine its lapses and tackling them.

This study is significant; it is expected to be essential because it is the first attempt to evaluate the English language e-curriculum that the Ministry of Education recently used. This study may help the specialists and decision-makers in e-curriculum development to determine strengths and weaknesses of the English language e-curriculum and benefit from to improve e-curriculum.

1.1. Question of the Study. This study aims to answer the following question.

What is the degree of appropriateness of the English e-curriculum from teachers' point of view, particularly the course objectives, content, learning activities, technological instructional procedures, technological activities, technological educational aids, and technological evaluation?

1.2. Review of the Related Literature. After reviewing educational research, the researchers collected studies relevant to this study.

Qunaiby et al. [47] conducted a study to identify the reality of e-learning in Palestine during the COVID-19 pandemic from the point of view of teachers. The descriptive-analytical approach was followed. A random sample consisted of 256 male and female teachers from the Palestinian governorates. The instrument was a questionnaire consisting of 15 items, including Palestinian curriculum, Palestinian teacher and e-training, and Palestinian technical infrastructure and relationship with civil society institutions. The study results showed that the Palestinian curriculum needs to be developed to fit in with e-learning to a large degree and with a percentage of 70%. The results also revealed that teachers need to be well-trained on using e-learning platforms, as the multiplicity of electronic educational platforms confuses teachers greatly according to their responses to the study tool by approximately 70%, in addition to the need for a clear plan to support vulnerable students who were affected negatively during the pandemic. The percentages of the study results indicated that the readiness of the Palestinian technical infrastructure was weak. The study recommended that the Palestinian curriculum must develop and design the educational content and methods that employ interactive learning to accommodate e-learning based on students' educational needs and the curriculum's general objectives, which should align with the general objectives of the English course. This is necessary to prepare the teachers and qualifying them to be engaged in e-learning effectively. There is an urgent need to improve the digital technology infrastructure in schools.

İşcan and Gürel [48] investigated the secondary school 9th-grade English curriculum with Stake's responsive evaluation model according to teachers. It aimed to analyze the secondary school 9th-grade English curriculum. The study used semi-structured interviews with 14 English teachers at three public and two private schools in Afyonkarahisar Province of Turkey. The study was designed with a holistic multiple case study, and the data were analyzed through descriptive analysis. The findings showed that the curriculum implementation differed according to the socioeconomic backgrounds of the public and private schools. While teachers working in state schools found the objectives to be above the level of the students, teachers working in private schools considered the objectives to be inadequate for the students. Teachers stated that the textbooks did not match with the curriculum content, that the textbooks were

inconvenient, and that evaluation activities provided in the curriculum such as videos, blogs, and websites could not be executed in classrooms because they were crowded. Those specific problems were experienced in applying the communicative language approach given in the curriculum. Teachers need more detailed explanations of curriculum components that schools should be supported with technical equipment.

Karacaoğlu [49] examined the evaluation of the efficiency of an online curriculum based on the views of lecturers and students enrolled in the program. The study data were collected using a survey. To collect qualitative data, interview forms developed by the researcher were used. Experts checked the reliability and validity of the interview forms in the field. The qualitative data were analyzed through content analysis. Based on the study's findings, the strengths and weaknesses of the online curriculum were determined, and some suggestions were offered. The study results indicate that both learners and lecturers believe that online education is beneficial and productive, and they are satisfied with it. Online education was found to be preferable because it saves time and money and is flexible. On the other hand, insufficient infrastructure caused limited interaction, unsustainable motivation, and negative aspects of the digital curriculum.

Al-Tarawneh and Al-Qadi [50] investigated the evaluation of the 10th-grade computerized mathematics curriculum from the perspective of the teachers and supervisors in the southern region of Jordan. It aimed to assess the tenth-grade computerized mathematic curriculum. The tool was a questionnaire of 43 items, which was developed. The sample was 15 supervisors of English language and 288 English language teachers. The findings revealed significant differences between the evaluating estimations of the supervisors and teachers in favor of the supervisors. This might refer to the assumption that supervisors have higher mechanical skills, which is attributed to their attendance to courses in computerization.

Moreover, the results showed that the evaluation for the statement relating to the easy moving and access of other pages from the home page was high due to the high potential of computer technology. This might be attributed to the programmers selecting the most suitable designs. The statement relating to the link between the computerized program tool educational goals mentioned in the curriculum got the highest evaluation. This might refer to the interest of the curriculum designers in achieving the harmony and appropriateness between the tools, methods, and educational objectives. In the field of teaching, the curriculum elements and tools were important.

Puttick et al. [51] conducted a study to investigate teacher authority in the classroom when a digital text is employed for instruction and investigate the challenges a small sample of teachers confront as they negotiate their role vis-a-vis the authority of the curriculum. The study followed the qualitative design. The data were drawn from eight days of classroom observation in two classrooms and implementation log and interviews of 4 teachers and students from 2 classrooms. Teachers and students were asked

questions about their experiences with the digital materials, focus groups, or interviews, and observation visits were formal. Teacher interviews were semi-structured. Teachers were asked what they liked and disliked about the curriculum, what features were helpful, and their perceptions of implementation overall. The findings showed that school vision and culture impacted the teacher using technological tools. They also revealed that the digital curriculum could provide clear direction and instructions to students for when to work in groups, in pairs, or individually. It also provides a place to add homework.

Additionally, teachers reported that digital curriculum has the power to support both teachers and students, and it includes features that accelerate and facilitate the teaching and learning process. It showed that teachers found the digital curriculum an excellent source of support for the topics central to their courses. They also pointed out that the online format was easy to use. The main recommendation was that designers and users of digital curricula highlight how they think of where the authority for teaching and learning in the classroom should be established.

Sun et al. [40] investigated what drives a successful e-learning? It is an empirical study of the crucial factors affecting learners' motivation and satisfaction. It established an integrated model with six dimensions: learners, teachers, courses, technology, design, and environment. A survey prepared investigated the critical factors affecting learners' satisfaction in e-learning. The sample was e-learner volunteers enrolled in 16 different e-learning courses at two public universities in Taiwan who participated in the study. 7-point Likert-scale questionnaires ranging from 1 as strongly disagree to 7 as strongly agree were used as a tool. A total of 645 surveys were sent via email. Two hundred ninety-five useable responses were gained. The findings showed that teachers' attitudes toward online learning influenced students' satisfaction. Teachers are the main factor of students' learning and accomplishments in face-to-face teaching or online learning using a digital curriculum. Teachers' attitudes affected learning activities and students' satisfaction. Additionally, students' anxiety toward using technology affected their satisfaction and motivation.

Smeets [35] followed a study entitled "does ICT contribute to powerful learning environments in primary education?". This study investigated the characteristics of learning environments and the contribution of ICT to learning environments. Questionnaires were filled out by 331 teachers in the highest grade of Dutch primary education. The findings revealed that the strategies implemented by teachers to adapt instruction that meet students' needs and abilities were minimal. In addition, teachers' views on the contribution of digital curriculum to active and autonomous learning, teachers' skills in using distance learning, and the teacher's gender appeared to be relevant background variables in this respect. Most teachers appreciated the value of ICT contribution to the learning environment. Teachers who appreciated ICT and considered it a means to assist students to be autonomous and active learners and teachers who were more professional in using technology tended to use open-ended types of technological

tools through instruction. Male teachers preferred open-ended use of technological tools more than female teachers did.

A review of the literature related to the theoretical background of the study revealed that teachers' attitudes toward e-curriculum affected students' satisfaction and motivation (e.g., [40, 48–52]). It was assured that teachers play a crucial part in evaluating curriculum and educational program (e.g., [35, 40, 48–51]). It was confirmed that distance learning, which mainly used e-curriculum, was beneficial and optimizing students' learning process [35, 49, 51].

Nevertheless, none of the reviewed research has investigated the English language's e-curriculum in the same setting of this study. Additionally, no studies focused on the domains that this study addressed. All reviewed studies were conducted in a different context. Therefore, it is expected that the results of this study may fill a gap in related literature. The similarity of the reviewed study with the researchers' study is that they focused on teachers' attitudes toward distance learning that use e-curriculum except for Al-Tarawneh and Al-Qadi [50]'s study, which investigated the evaluation of traditional curriculum, not e-curriculum. At the same time, both of them go hand in hand with investigating the English language curriculum concerning teachers' attitudes. To the best knowledge of the researcher, research on English e-curriculum is limited to one only study followed by Al-Tarawneh and Al-Qadi [50], who investigated 9th-grade English curriculum, and the others investigated different subjects and different grades. Most of the reviewed studies focused on different dimensions, whereas this study focused on aims, goals, objectives, content, learning activities, and evaluation integrated with technology. These dimensions are addressed in the Zais model. As a result, the study will be more accurate when there is a specific model. It is noticed that in all of the reviewed studies, the e-curriculum that teachers used were prepared and designed by them or trade programs except Qunaiby et al. [47]; in this study, the researchers surveyed the teachers' perspectives of the utility of e-curriculum presented and developed by the Jordanian Ministry of Education through Darsak Platform during COVID-19 pandemic.

2. Method

This study followed the descriptive research design by surveying teachers' responses. The survey questionnaire was sent to all EFL teachers in Jordan; nevertheless, only 500 filled forms were returned. The questionnaire included six domains: objectives, content, teaching strategies, technological teaching aids, electronic activities, and electronic assessment. The survey included the teacher's gender, the number of years of experience as a teacher, and the teacher's degree of education. The first domain included ten items. The second domain included 19 items. The third domain included nine items. The fourth domain included eight items, the fifth domain included eight items, and the sixth domain included 11 items. In total, it included 65 items. These Likert items consisted of five-point scales ranging from strongly agree, agree, neutral, disagree to disagree strongly. All items were Likert items, consisting of five-point scales ranging from "strongly agree" to "strongly disagree."

A questionnaire developed by researchers was used to measure the perspective of the study sample about the English e-curriculum. The following steps were followed: (1) reviewing literature and studies relating to this study; (2) developing 65 items using the Likert-scale model ranging from 1 to 5, including five domains for evaluating the English e-curriculum from the perspective of the English language teachers; and (3) the validity of the survey was verified through content validity: seven experts in the curriculum field were consulted to study the tool. Those were instructors in Yarmouk University who are specialized in technology, teaching the English language and curriculum. Consultant experts were asked to give their feedback and comments about the survey items in terms of appropriateness, whether it measures what is developed for, and verifying its language accuracy and item clarity. Experts were asked to provide their suggestions if they needed any amending. Based on the experts' notes, the items that got the agreement were not changed. Some items were amended, and some were deleted. The final version of the questionnaire consisted of 65 items.

Five hundred teachers completed the questionnaire. The researchers on Google documents developed it. Then, the link was sent to all heads of supervision units of the Jordanian Ministry of Education to share it with English language teachers. The results recorded on Google document analysis revealed that most respondents were female. They were 77% of respondents, while the males were 22%. The average years of experience were 15 years. 35% of respondents had more than 15 years of experience as teachers. 21% of respondents had from 10 to 15 years of experience as teachers. 24% of them had from 5 to 10 years of experience in education. 18% of respondents had lower than five years of experience in education. Concerning the highest degree of education completed by teachers, the results showed that most respondents completed bachelor's degrees, which accounts for 76.7%, and 17% of respondents completed master's degrees.

The final version of the survey consisted of 65 items with a 5-point graded Likert scale. 5 points were given to strongly agree; 4 points were given to agree; 3 points were given to neutral; 2 points were given to disagree; and 1 point was given to strongly disagree. The experts' notes in the evaluation and the following criteria were considered for judging the degree of standard availability:

(i) If the evaluation of the item equals or is less than 2.33, the degree is low.

(ii) If the evaluation of the item equals or more than 2.33 and less than 3.66, the degree is medium.

(iii) If the evaluation of the item equals or more than 3.67, the degree is high. This is by dividing the distance between (1), which is the lowest grade, and (5), which is the highest grade, into three equal distances (low, medium, and high).

2.1. Reliability. To verify the reliability of the degree of appropriateness of the English e-curriculum, the researcher uses the Cronbach alpha formula for internal consistency.

The coefficient of consistency of the degree of appropriateness of English e-curriculum was 0.987, which is good constancy, and this value is acceptable for this study.

3. Results and Discussion

This section shows the results of data analysis for the attempt to answer the core question of this study that this articulated as the following: what is the degree of appropriateness of English e-curriculum from the point of view of teachers, in particular the domains of the course objectives, content, learning activities, technological instructional procedures, technological activities, technological educational aids, and technological evaluation?

To answer the question of the study, the researcher calculated the means, standard deviations, rank, and degree for the performance of the study sample on the degree of appropriateness of English e-curriculum from teachers' point of view, and Table 1 presents the results as follows.

Table 1 shows that the degree of appropriateness of the English e-curriculum from the point of view was medium, as its mean was 2.48 with a standard deviation of 0.71. All dimensions were medium degrees, as the means ranged between 2.58 and 2.35. In the first rank came the field of "Electronic Assessment," with a mean of 2.58 and a standard deviation of 0.87, suggesting a medium range. In the second rank came the field of "Content," with a mean of 2.51 and a standard deviation of 0.80, with a medium degree. The field of "The Use of Technological Teaching Aids" came in the penultimate rank with a mean of 2.44 and a standard deviation of 0.80, signifying a medium degree. The field of "Objectives" came the last rank with a mean of 2.35 and a standard deviation of 0.71, reflecting a medium degree.

The results of the items of each field were as follows.

3.1. Electronic Assessment. Table 2 shows that the degree of the field of Electronic Assessment was medium, as its mean was 2.58 with a standard deviation of 0.87. All items were in the medium range, as the means ranged between 2.73 and 2.40. In the first rank came item (65), "Electronic assessment reflects students real results," with a mean of 2.73 and a standard deviation of 1.12, signifying a medium degree. It gained the highest degree with a mean of 2.73. It is the highest among other items; this might be because high-precision numbers can yield accurate results. The evaluations of the rest items were medium and low for the item (Electronic assessment matches the units' general objectives) with a mean of 2.40.

In the second rank came item (59), "The electronic assessment takes the students' level and the individual differences into consideration," with a mean of 2.67 and a standard deviation of 1.02, signaling a medium degree. Item (61), "Electronic assessment provides students with immediate feedback," came in the penultimate rank with a mean of 2.54 and a standard deviation of 0.98, reflecting a medium degree. Item (55), "Electronic assessment matches the units' general objectives," came in last with a mean of 2.40 and a standard deviation of 0.93, indicating a medium degree. The total evaluation of the field of electronic assessment was medium because of the effort made by the MOE in constructing e-curriculum.

3.2. Content. Table 3 shows that the degree of the content field was medium, as its mean was 2.51 with a standard deviation of 0.80. All items were in the medium degree, as the means ranged between 2.61 and 2.39. In the first rank came item (26), "Electronic instructional materials help to develop students' writing skill," with a mean of 2.61 and a standard deviation of 1.07, signaling a medium degree. This might be due to the extra care and focus of the content designers who raised the number of exercises interested in promoting writing skills, especially since students mainly send their homework in the written mode.

The overall evaluation for the content domain was medium with a mean of 2.51. In the second rank came item (21), "Electronic instructional materials contribute to motivating students' creativity," with a mean of 2.58 and a standard deviation of 0.99, reflecting a medium degree. Item (23) "The chosen technological texts develop English vocabulary repertoire" came in the penultimate rank with a mean of 2.40 and a standard deviation of 0.96, reflecting a medium degree. Item (27) "Electronic instructional materials help to develop students' listening skills" came last with a mean of 2.39 and a standard deviation of 0.97, indicating a medium degree. This might be due to the absence of face-to-face interaction in which students can listen to each other and their teachers.

3.3. Electronic Activities. Table 4 reveals that the items' evaluation in Electronic Activities' domain was medium, as its mean was 2.51 with a standard deviation of 0.82. All items were in the medium degree, as the means ranged between 2.62 and 2.35.

In the first rank came item (49), "Electronic activities take individual differences between students into consideration," and item (50), "Electronic activities take the learning environment into consideration," with a mean of 2.62 and a standard deviation of 1.03 and 1.01, signaling a medium degree. The highest degree of the evaluation was for the items "Electronic activities take individual differences between students into consideration" and "Electronic activities take the learning environment into consideration" with a mean of 2.62. This might be attributed to the fact that the content is designed to meet the learning needs of diverse learners to achieve differentiated instruction. It might be attributed to the curriculum designers' care and interest to implement the theories of learning and teaching such as the cognitive theory, learning styles, and theories in designing content scientifically according to the base of starting from the straightforward content to the more difficult in presenting content. An application VAK theory of learning styles as an approach to teaching might assist in meeting students' needs and interests.

TABLE 1: Standard deviations, means, ranks, and degree of the study sample on the scale of the degree of appropriateness of English e-curriculum from the point of view.

No.		Mean	Std. deviation	Rank	Degree
6	Electronic Assessment	2.58	0.87	1	Medium
2	Content	2.51	0.80	2	Medium
5	Electronic Activities	2.51	0.82	2	Medium
3	Teaching Strategies	2.46	0.80	4	Medium
4	The Use of Technological Teaching Aids	2.44	0.80	5	Medium
1	Objectives	2.35	0.71	6	Medium
	Total	**2.48**	**0.71**		Medium

Bold highlights the total average values.

TABLE 2: Means, standard deviations, ranks, and degree of the study sample on the field of Electronic Assessment.

No.	Item	Mean	Std. deviation	Rank	Degree
65	The electronic assessment reflects students' actual results	2.73	1.12	1	Medium
59	The electronic assessment considers the students' level and individual differences	2.67	1.02	2	Medium
58	The electronic assessment employs different assessment strategies like performance-based assessment	2.63	0.99	3	Medium
64	The electronic assessment provides teachers with different kinds of assessment such as diagnostic, formative, interim, and summative	2.59	1.00	4	Medium
60	Electronic assessment motivates students' scientific thinking	2.58	1.00	5	Medium
56	Electronic assessment takes the students' knowledge and linguistic skills into account	2.57	1.01	6	Medium
57	The electronic assessment employs multiple tools, including a checklist and rubric	2.57	1.00	6	Medium
62	The electronic assessment provides teachers with an ongoing form of assessment	2.57	0.98	6	Medium
63	Electronic assessment results help teachers to develop their students' performance	2.57	1.00	6	Medium
61	The electronic assessment provides students with immediate feedback	2.54	0.98	10	Medium
55	Electronic assessment matches the units' general objectives	2.40	0.93	11	Medium
	Electronic Assessment	**2.58**	**0.87**		Medium

Bold highlights the total average values.

TABLE 3: Means, standard deviations, ranks, and degree of the study sample on the field of content.

No.	Item	Mean	Std. deviation	Rank	Degree
26	Electronic instructional materials help to develop students' writing skills	2.61	1.07	1	Medium
21	Electronic instructional materials contribute to motivating students' creativity	2.58	0.99	2	Medium
19	Electronic instructional materials develop students' social and individual responsibility	2.56	1.02	3	Medium
24	Electronic instructional materials help to develop students' speaking skills	2.55	1.10	4	Medium
29	The ICT-based strategies match students to cognitive abilities	2.55	1.00	4	Medium
20	Electronic instructional materials develop students' critical thinking	2.54	0.98	6	Medium
22	Electronic instructional materials indicate accuracy in selecting texts	2.54	0.95	6	Medium
12	Instructional materials develop students' psychomotor skills	2.53	0.92	8	Medium
13	Electronic instructional materials match students' interests and needs	2.53	0.99	8	Medium
16	Electronic instructional materials provide students with the proper feedback	2.53	0.98	8	Medium
15	Electronic instructional materials help students to apply various life skills	2.51	0.95	11	Medium
28	The electronic content presents various strategies in teaching English online	2.50	1.01	12	Medium
14	Electronic instructional materials address contemporary intellectual issues	2.49	0.89	13	Medium
11	Instructional materials match students' cognitive abilities	2.48	0.93	14	Medium
25	Electronic instructional materials help to develop students' reading skills	2.48	1.04	14	Medium
17	Electronic instructional materials are derived from Jordanian and Arab environments	2.46	0.94	16	Medium
18	Electronic instructional materials support horizontal integration to other subjects technologically	2.46	0.94	16	Medium
23	The chosen technological texts develop English vocabulary repertoire	2.40	0.96	18	Medium
27	Electronic instructional materials help to develop students' listening skills	2.39	0.97	19	Medium
	Content	**2.51**	**0.80**		Medium

Bold highlights the total average values.

TABLE 4: Means, standard deviations, ranks, and degree of the study sample on the field of Electronic Activities.

No.	Item	Mean	Std. deviation	Rank	Degree
49	Electronic activities take individual differences between students into consideration	2.62	1.03	1	Medium
50	Electronic activities consider the learning environment	2.62	1.01	1	Medium
48	Electronic activities match students' knowledge levels	2.56	0.94	3	Medium
51	Electronic activities are in line with the Jordanian community philosophy	2.53	1.00	4	Medium
52	Electronic activities take students' prior knowledge into consideration	2.50	0.96	5	Medium
53	Electronic activities include extracurricular activities	2.50	0.93	5	Medium
54	The e-curriculum presents a variety of activities	2.39	0.94	7	Medium
47	Electronic activities match the instructional materials	2.35	0.91	8	Medium
	Electronic Activities	**2.51**	**0.82**		Medium

Bold highlights the total average values.

Item (54) "The e-curriculum presents a variety of activities" came in the penultimate rank with a mean of 2.39 and a standard deviation of 0.94, indicating a medium degree. Item (47) "Electronic activities match the instructional materials" came in the last rank with a mean of 2.35 and a standard deviation of 0.91, representing a medium degree. The overall evaluation for the field of electronic activities was medium with a mean of 2.51.

3.4. Teaching Strategies.

Table 5 shows that the degree the field of "Teaching Strategies" was medium, as its mean was 2.46 with a standard deviation of 0.80, and items were in the medium-low degree, as the means ranged between 2.51 and 2.39.

In the first rank came item (35), "ICT-based strategies develop students' creative thinking," with a mean of 2.51 and a standard deviation of 0.96, thereby indicating a medium degree. This might be attributed to the high potential of computer technology that made it easy for the designers to select activities that promote students' creativity.

In the second rank came item (33), "ICT-based strategies develop students' language experience," with a mean of 2.50 and a standard deviation of 0.93, indicating a medium degree. Item (36) "The presentation of the ICT-based strategies is in line with the time of the teaching period" came in the penultimate rank with a mean of 2.45 and a standard deviation of 0.93, representing a medium degree. Item (30) "ICT-based strategies match to specific goals in each unit" came last with a mean of 2.29 and a standard deviation of 0.85, signifying a low degree.

3.5. The Use of Technological Teaching Aids.

Table 6 reveals that the degree the field of "The Use of Technological Teaching Aids" was medium, as its mean was 2.44 with a standard deviation of 0.80, and items were in the medium-low degree, as the means ranged between 2.53 and 2.32. In the first rank came item (42) "Teaching aids develop students' behaviors" with a mean of 2.53 and a standard deviation of 0.98, reflecting a medium degree. In the second rank came item (45) "The time allocated is appropriate to apply the technological teaching aids" with a mean of 2.52 and a standard deviation of 0.97, with a medium degree. Item (40) "Teaching help match the

content" came in the penultimate rank with a mean of 2.34 and a standard deviation of 0.90, with a medium degree.

The overall evaluation for the domain of the use of technological aids was medium with a mean of 2.44. Item (39), "Teaching help assist in achieving the desired objectives," came the last rank with a mean of 2.32 and a standard deviation of 0.89, and this item obtained a low degree. This might be due to the several problems that users of the Internet face while using the Internet. Some of the problems that Internet users face are the strength of connections, the Internet speed, and pressure on the Internet.

3.6. Objectives.

Table 7 reveals that the degree of the field of "The use of Technological Teaching Aids" was medium, as its mean was 2.35 with a standard deviation of 0.71, and items were in the medium-low degree, as the means ranged between 2.61 and 2.13. In the first rank came item (10), "Online learning objectives are observable and measurable," with a mean of 2.61 and a standard deviation of 1.05, indicating a medium degree. It obtained the highest degree with the mean of 2.61. This might be attributed to the teachers' focus and care for the educational objectives and their interest in accomplishing these desired objectives in the learning and teaching process.

In the second rank came item (6), "Learning objectives which are related to learning technology are aligned with the Jordanian community's vision and culture," with a mean of 2.43 and a standard deviation of 0.90, signaling a medium degree. Item (1) "The general objectives of curriculum aligned to the general objectives of English course" came in the penultimate rank with a mean of 2.18 and a standard deviation of 0.76, indicating a low degree. Item (2) "The general objectives need to integrate the most up-to-date technology" came last with a mean of 2.13 and a standard deviation of 0.85, reflecting a low degree.

The results showed, in general, that the appropriateness of the e-curriculum based on the teachers' point of view is medium. This means they are not completely satisfied with it and not entirely against it. This result asserts that the e-curriculum became an inevitable result of the COVID-19 pandemic, which pushed the whole world to implement it to keep going on the track of continuity of education. It has also created the most significant change in the educational system's history of education globally and Jordan specifically [4]. It has been reported that distance education has become

TABLE 5: Means, standard deviations, ranks, and degree of the study sample on the field of Teaching Strategies.

No.	Item	Mean	Std. deviation	Rank	Degree
35	ICT-based strategies develop students' creative thinking	2.51	0.96	1	Medium
33	ICT-based strategies develop students' language experience	2.50	0.93	2	Medium
37	ICT-based strategies provide a suitable learning environment	2.50	0.96	2	Medium
38	ICT-based strategies can be employed on the platform	2.50	0.95	2	Medium
32	ICT-based strategies assist students to be motivated to participate in the learning and teaching process	2.47	0.95	5	Medium
34	ICT-based strategies help students employ knowledge and convert it to the educational context	2.47	0.94	5	Medium
31	ICT-based strategies develop students' positive attitudes toward learning the English language	2.46	0.90	7	Medium
36	The presentation of the ICT-based strategies is in line with the time of the teaching period	2.45	0.93	8	Medium
30	ICT-based strategies match specific goals in each unit	2.29	0.85	9	Low
	Teaching Strategies	**2.46**	**0.80**		Medium

Bold highlights the total average values.

TABLE 6: Means, standard deviations, ranks, and degree of the study sample on the field of The Use of Technological Teaching Aids.

No.	Item	Mean	Std. deviation	Rank	Degree
42	Teaching help develop students' behaviors	2.53	0.98	1	Medium
45	The time allocated is appropriate to apply the technological teaching aids	2.52	0.97	2	Medium
46	Technological teaching aids are in line with the Jordanian community philosophy	2.50	0.96	3	Medium
44	Technological tools can be implemented quickly	2.49	0.95	4	Medium
43	Various technological tools are used in each unit	2.47	0.97	5	Medium
41	Teaching helps develop students' knowledge	2.38	0.92	6	Medium
40	Teaching aids match the content	2.34	0.90	7	Medium
39	Teaching helps in achieving the desired objectives	2.32	0.89	8	Low
	The Use of Technological Teaching Aids	**2.44**	**0.80**		Medium

Bold highlights the total average values.

TABLE 7: Standard deviations, means, ranks, and degree of the study sample on the field of objectives.

No.	Item	Mean	Std. deviation	Rank	Degree
10	Online learning objectives are observable and measurable	2.61	1.05	1	Medium
6	Learning objectives related to learning technology align with the Jordanian community's vision and culture	2.43	0.90	2	Medium
7	The general objectives are consistent with students' interests in using technology	2.42	0.92	3	Medium
8	Learning technology objectives assist in connecting learning units	2.40	0.93	4	Medium
9	Learning objectives include language skills that are suitable to students' grade level	2.40	1.01	4	Medium
4	Learning objectives help improve students' knowledge of technology	2.31	0.93	6	Low
3	The general objectives are related to the Jordan ministry of education's vision of integrating online learning into the learning process	2.28	0.89	7	Low
5	Learning objectives improve students' skills in using technology	2.28	0.94	7	Low
1	The general objectives of the curriculum align with the general objectives of the English course	2.18	0.76	9	Low
2	The general objectives need to integrate the most up-to-date technology	2.13	0.85	10	Low
	Objectives	**2.35**	**0.71**		Medium

Bold highlights the total average values.

more common and mainstream [5]. Mainly, all education sectors perceived it positively. In sum, technology has become crucial, and we desperately need it to help education grow up and go on.

The total evaluation of the six domains was medium. The results indicated that teachers are almost satisfied with the e-curriculum. This is consistent with what is shown in the following studies [14–16, 49]. McMahon's study [17] showed that using ICT may enhance students' higher-order critical thinking skills. This point was consistent with the results recorded in the evaluation domain; precisely, the following items: "Electronic instructional materials develop students' critical thinking" and "Instructional materials match students' cognitive abilities." The results showed that the evaluation of mentioned statements was medium.

In addition, results pointed out that teachers perceived that using e-curriculum contributed to L2 language growth in terms of the four skills. This is shown in the result

recorded for evaluating statement numbers 12, 15, 26, and 30. This point was inconsistent with what was pointed out in Blake's study [53], which showed that technological content eventually pushes learners to develop and combine the four skills: speaking, listening, reading, and writing, in ways that resemble how they naturally engage with the digital facets of their lives.

From teachers' perspectives, the results of statements relating to individual differences in the first domain, the second domain, and the third domain, content and electronic assessment, showed that e-curriculum met students' needs, differences, and interests. In particular, the evaluation of the following items was medium: the "Electronic assessment takes the students' level and the individual differences into consideration," "Electronic instructional materials matches students' interests and needs," "Electronic activities take individual differences between students into consideration," "The e-curriculum presents a variety of activities," "the ICT-based strategies match students to cognitive abilities," "Instructional materials match students' cognitive abilities," and "Electronic activities match students' knowledge level." This result was in line with what was pointed out in Honey and Hilton's study [51] and Nussbaum and Diaz [55] that showed that technology integrated with content could effectively achieve curricular objectives and meet learners' diverse needs and differentiated learning [54–56].

The results revealed that the total evaluation of six domains got medium. This means that the e-curriculum was generally beneficial based on teachers' perspectives. This is consistent with what was pointed out in Karacaoğlu's study [49] and Al-Tarawneh and Al-Qadi [50]. It showed that both learners and lecturers believe that online education is beneficial and productive, and they are satisfied with it. Online education was preferable because it is time-saving, more economical, and flexible. This study's findings were in line with Puttick, Drayton, and Karp's study [51] that showed that digital curriculum includes several features that support both teachers and students and facilitate the teaching and learning process.

The evaluation of the following statements was medium: "The chosen technological texts develop English vocabulary repertoire, Electronic instructional materials contribute to motivating students' creativity, the electronic content presents various strategies in teaching English online, and ICT-based strategies develops students' language experience." This may be attributed to the potential that technology can provide. It assists in meeting students' learning styles, multi-intelligence, and interests. It is in line with what is pointed out in Al Shdaifat, Al-Abed Al-Haq, and Al-Jamal's study [57], which showed that technological materials might effectively impact building language and creativity due to the potentials that it provides.

Regarding the domain of objectives, the statements "The general objectives of curriculum align to the general objectives of English course," "Learning objectives help improving students' knowledge of technology," "The general objectives are related to the Jordan ministry of education's vision of integrating online learning to the learning process,"

"Learning objectives help improving students' skills of using technology," and "The general objectives need to integrate the most up-to-date technology" got a low degree of evaluation. This might be attributed to the curriculum designers' lapses in achieving the concord between the tools, strategies, and learning objectives. These results were consistent with what was revealed in Qunaiby et al.'s study [47], which revealed that the teachers' readiness and technical infrastructure were weak. So, the study recommended that e-curriculum be developed with a redesign of educational content. Of course, educational methods that promote interactive learning based on students' educational needs and the curriculum's general objectives should align with the English course's general objectives.

The evaluation of the following items is low: "Teaching aids assist in achieving the desired objectives," "Learning objectives help improve students' skills of using technology," and "ICT-based strategies match to specific goals in each unit". This result was not in line with what was pointed out in Honey and Hilton's study [54], and Nussbaum and Diaz [55] showed that technology integrated with content could effectively achieve curricular objectives [54–56]. Smeets [35] pointed out that most teachers valued the potential contribution of ICT to the learning environment as quite large. He added that teachers who appreciated ICT considered it a means to assist students in being autonomous and active learners, whereas in this study, the evaluation of the following statement was medium: "Electronic activities take the learning environment into consideration," "Electronic instructional materials develop students' social and individual responsibility," and "ICT-based strategies provide a suitable learning environment," and teachers are nearly satisfied with these statements.

4. Recommendations

In light of the finding of this study, some recommendations are presented as follows: amending and modifying the English e-curriculum through increasing strengths avoiding lapses and meeting students' needs and variety in the Jordanian schools, mainly that Jordan currently adopts the hybrid education. Providing teachers with updated technological tools can help them achieve more interaction among students, including teacher's guide books. Fundraisers are invited to provide schools with tablets and charge their credits to guarantee the high speed of the Internet in the schools in Jordan. There is a need for further research on other stakeholders, such as the supervisors' and students' perspectives.

As for the implications, teachers can be implementers and adopters of digital teaching and learning materials. As shared by Honey and Hilton [54], teachers can effectively facilitate the use of technology by students to achieve curricular objectives and differentiated learning. Teachers can tailor instructional materials accessible to learners. Such materials can easily entail students' interest. Further, a learning guide with the detailed description of the practical use of the instructional material is needed. Additionally, synchronous and/or asynchronous modes of delivery are

helpful. Last but not least, teachers can focus on how to inspire students to be critical and wise in using electronic information, how to be accurate while gathering information found on the Internet, and how to determine the reliability of websites.

The limitations of this study are as follows: only 500 respondents from all over Jordan filled out the questionnaire and evaluated the English e-curriculum. The researchers adopted a specific model to evaluate the recent English e-curriculum, which is the Zais model, conducted in 2020–2021. The study highlighted teachers' perspectives of e-curriculum with disregard of supervisors' and students' perspectives.

Data Availability

The data are available upon direct request to the corresponding author.

Conflicts of Interest

The authors declare that there are no conflicts of interest.

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