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The Role of Technology in the Curriculum Design Process

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استطلاع دور التكنلوجيا في عمليه تصميم المنهج

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المستخلص

تسلط الواسة الحالية الصوء على العلاقة بين التكنلوجيا وعملية تصميم المنهج. تهدف الواسة الحالية لايجاد الدور والتضمين للتكنلوجيا في البيئة التعليميه ومايترتب عليه في تصميم المنهج. لتحقيق هذا الهدف قام الباحث بعرض الواسات السابقة التي تخص تضمين التكنلوجيا وعلاقتها بالتعليم وارتباطها بالتعليم اضافة الى ارتباطها في قاعة الدرس.قام الباحث بعرض امثلة عن تضمين التكنلوجيا ضمن متطلبات التدريس مع توصيات لاستعمال التكنلوجيا داخل صفوف تعلم اللغة بصورة منتظمه ومتكاملة. تظهر الواسة ذلك ان التكنلوجيا هي ليست عامل ثانوي انما هي عامل اساسي مكمل للمنهج لكن تحتاج الى جهد كي تكلل العمليه التعليمية بنجاح وهذا الجهد يستند الى تدريب المعلمين لتطبيق الخطط الفعالة بمساعدة التكنلوجيا.

Abstract

The present study shades light on the relationship between technology and the process of curriculum design. The study aims at finding out the role and implementations of Technology in educational environment and thus in designing the curriculum. To achieve this aim, the researcher reviewed the literature of technology, its link to classrooms, examples, implementations on teaching, requirements and recommendations for technology use in a language class and in consequence the integration of technology in the curriculum design. The study reveals that technology is not secondary but essential factors that complement the curricula but needs efforts to successfully indulge it in the teaching process. These efforts are based on training teachers to implement effective plans with aids of technology.**Keywords:** Technology, Internet resources, Computer-mediated Communication.

IntroductionTechnology is transforming the way language teachers teach and language learners learn, and as a result, technology is playing an increasingly essential role in curriculum implementation (Warschauer and Meskill, 2000). Computers and interactive whiteboards are becoming more prevalent in schools worldwide, and the rate at which schools may link to one another and to the rest of the world continues to accelerate. Technology is increasingly mobile for instructors and students, and laptop computers, tablet devices, and cellphones are a natural component of the teaching and learning environment in many schools. Teachers and school administrators are more accepting of the role that digital resources and the internet can play in increasing learners' motivation and engagement, assisting learners with varying learning styles, and enhancing the quality of teaching and learning (Zhao, 2005).Language curriculum design is required to be purposeful in order to maximise learning. A curriculum designer should first identify the desired results and then work backward to identify instructional strategies that enable students to accomplish those goals (Al-Mahrooqi & Troudi, 2014). The following sections will discuss the notion of technology, its relationship to language learning and how it should be integrated in the curriculum.Section One: Technology and Education

1.1 Technology and Education

Language is a critical factor in international communication operations. Students' competency and communication rely on several aspects of English language abilities such as listening, speaking, reading, and writing (Grabe &

Stoller, 2002). Additionally, Ahmadi (2017) noted that one of the critical components of learning is the strategy used by teachers to support the language learning process in their lessons. Becker (2000) views computers as a critical educational tool in language classrooms; if teachers have convenient access, are adequately trained, and have some control over the curriculum. Many instructors view computer technology as an integral aspect of giving a high-quality education.Different researchers have defined technology. According to Man (2012), it is the practical application of knowledge in a certain field and a means of accomplishing a job specifically via the use of technical procedures, methods, or knowledge. Technology utilisation include not just equipment (computer hardware) and instruments, but also organised relationships with other humans, machines, and the natural world (Man, 2012).According to Henness et al. (2005) and Pourhosein et al. (2017), technology integration is described as the process through which instructors use technology to do routine tasks more effectively and to reshape these routine tasks. Dockstasxder (2008) described technology integration as the process of integrating technology into the educational environment in order to improve it. It complements classroom instruction by allowing students to complete tasks using a computer rather than a pencil and paper.

1.2 Technology Usage in EFL classes

Technology is a very useful tool for educators. Learners must incorporate technology into a major fraction of their learning process. Teachers should provide an example of how to effectively utilise technology to assist the curriculum so that students may improve their actual usage of technology in developing their language abilities (Costley, 2014). Through technology, it is possible to boost learners' collaboration. Cooperation is a critical component of learning. Learners collaborate to develop projects and benefit from one another's efforts by reading their peers' work (Keser et al., 2011).According to Bransford, et l., (2000), the use of computer technology enables instructors and students to create local and worldwide communities that connect them to one another and extend their learning opportunities. They continued by stating that the beneficial effect of computer technology is not automatic; it is reliant upon how instructors implement it in their language courses.According to Susikaran (2013), fundamental changes have occurred in classrooms aside from teaching approaches since the chalk and talk method is ineffective at teaching English. According to Raihan and Lock (2012), a well-designed classroom environment teaches students how to study efficiently with increased technology is more successful than a lecture-based class. Teachers should develop strategies for using technology as a helpful learning tool for their students, even if they have not learned technology and are unable to utilise it proficiently.The introduction of technology has significantly altered the techniques of teaching English. It offers a plethora of possibilities for making instruction more engaging and beneficial in terms of progress (Patel, 2013). In traditional classes, professors stood in the front of class and use a chalkboard or whiteboard to provide lectures, explanations, and teaching. These methods must be modified in technology of technological advancements. The use of multimedia texts in the classroom aide’s students in developing a working knowledge of vocabulary and linguistic structures. Additionally, multimedia is used to supplement learners' linguistic skills by utilising print books, movies, and the internet. The use of print, video, and the internet enables learners to get information and provides them with a variety of materials for analysing and interpreting both language and settings (Arifah, 2014).Arifah (2014) asserts that the usage of the internet raises learners' motivation. The usage of film in the classroom enables students to engage with the subject and expand their understanding. When technology is employed to facilitate learning, such as a computer and the internet, students can gain relevant knowledge. technology to aid them in learning, they strengthen their higher order thinking skills. It may be stated that a real integration of multimedia and instructional methods is critical for attracting learners' attention to English language acquisition.

1.2 Technology in the Developmental Theory

Additionally, the theory of language learning has evolved to include a broader view of the desired product and a renewed emphasis on the learning process. A main focus on the final products of grammatical competence has expanded to include various types of communicative competence, with the objective of developing not only formal knowledge but also the ability to utilise language for effective connections and activity (Warschauer, 2000). This expansion has resulted in a greater emphasis on classroom processes, or, more precisely, on the interaction of product and process, Autonomous learning, collaborative learning, and the creation and practise of language learning methods are all intended to equip students to continue their own learning and communicative innovation outside of the classroom (Markee, 1997a).

1.4 Technology in Language Curriculum

As the effectiveness of a curriculum becomes more dependent on its ability to make effective use of the potentials enabled by technology, the function of technology in the curriculum presents a number of critical challenges (Staples et.al 2005; Glazer et al, 2005). Among the most notable are the following:

1- The objectives of technology use

The role of technology in a school is determined by the school's character, the structure of its faculty and students, the type of its programmes, and the extent to which the school's resources and learning culture can support technology. There are questions should be askedin relation:

- What are the advantages for instructors, students, and the school?
- What impact will it have on the nature of education and learning?
- How will it contribute to the curriculum's objectives?
- How will this result in an increase in the development of knowledge and skills?

2- Technical abilities required of teachers and students

Pupils and instructors sometimes have varying levels of proficiency with technology and computer software, with students frequently possessing a higher level of proficiency than their teachers. Both must have confidence in their ability to utilise available resources and in their ability to master new software programmes.

3- Infrastructure required

These are determined by some questions:

- What assets and resources exist to support technology use?
- Has any investment been made in specialised technology equipment or classrooms?
- Do students have direct access to computers and other digital devices in their classrooms or at a media or self-service centre?

4- Technological resources available

Computers, interactive whiteboards, mobile devices such as smartphones and tablets, digital cameras, social media platforms and networks, software programmes, and the Internet are just some of the technologies that are available. To deal with this:

- Which of these is easily accessible and available?
- Will the school provide resources such as CD-ROMs and other support materials, such as commercially generated learning resources?

5- technology integration into the teaching, learning, and evaluation processes in the classroom

There are several methods to integrate technology into teaching, learning, and assessment, and new opportunities emerge practically frequently. For instance:

- Technology-enhanced project-based learning. Mobile device use in the classroom, electronic portfolio assessment, PowerPoint presentations
- Mobile Handheld Devices for Education, such as mobile phones, MP3 players, and tablets
- Utilization of interactive whiteboards in novel ways, Final evaluation through video
- Projects on the web and collaborative online research, Media made by students, such as podcasts, films, and slideshows, Online collaborative tools such as Wikis and Google Docs

6- Combination of face-to-face instruction in the classroom with online learning

The following summarises the possible options (Grgurovic, 2010 cited in Richards, 2015: 28):

Type	*Features*
Fully face-to-face	All teaching is classroom-based
Web-enhanced	A minimum amount of on-line material used, such as posting syllabus, assignments, and test scores
Blended	Significant on-line component (e.g. 55% face-to-face 45% on-line)
Hybrid	On-line replaces 45-80 of classroom teaching
Fully on-line	Up to 100% of learning activities conducted on-line

Section Two: Integrating Technology in Education

2.1 Requirements for Integration

Technology integration is no longer optional in today's classrooms; it is a required component. Teachers must be digitally knowledgeable, and high-quality schools must make efficient use of the resources made accessible by technology. A declaration of standards for school administrators (TSSA Collaborative, 2001) might also serve as the basis for defining technology standards for schools. Schools should ensure that their curricula, instructional methodologies, and learning environments include suitable technology to improve student learning and teaching. They should do the following actions in order to accomplish this (Richards, 2015):

A. identify, use, evaluate, and promote appropriate technologies to enhance and support instruction and standards -based curriculum leading to high levels of student achievement.

B. facilitate and support collaborative technology -enriched learning environments conducive to innovation for improved learning.

C. provide for learner -centered environments that use technology to meet the individual and diverse needs of learners.

D. facilitate the use of technologies to support and enhance instructional methods that develop higher-level thinking, decision-making, and problem-solving skills.

E. provide for and ensure that faculty and staff take advantage of quality professional learning opportunities for improved learning and teaching with technology.

Technology Standards (NETS) for Teachers created by the International Society for Technology in Education (ISTE, 2000) asserts on the necessity of teacher's literacy in technology in the following points:

1. Teachers demonstrate a sound understanding of technology operations and concepts
2. Teachers plan and design effective learning environments and experiences supported by technology.
3. Teachers implement curriculum plans that include methods and strategies for applying technology to maximize student learning.
4. Teachers apply technology to facilitate a variety of effective assessment and evaluation strategies
5. Teachers use technology to enhance their productivity and professional practice.
6. Teachers understand the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and apply those principles in practice.

In the same vein, the TESOL organization has developed technology standards for both learners and teachers which consists of both goals and standards Healey et al., 2011). The goal that describes teachers' use of technology states, "Language teacher integrate pedagogical knowledge and skills with technology to enhance language teaching and learning (p. vii) and describes four standards for this goals:

1. Language teachers identify and evaluate technological resources and environment for suitability for their teaching context.

2. Language teachers coherently integrate technology into their pedagogical approaches.

3. Language teachers design and manage language learning activities and tasks using technology appropriately to meet curricular goals and objectives.

4. Language teachers use relevant research findings to inform the planning of language learning activities and tasks that involve technology (p vii).

2.2 Support for Technology Integration

Levy (2010) identifies five levels at which technology can support language teaching (pp.16–17).

- **The physical level**, with tools such as mobile phones, digital cameras, laptops and tablets.
- **The management level,** which includes learning management systems (LMSs) that enable the administration, delivery, tracking, reporting etc. of a language course.
- **The applications level,** including word processing software, email and chat clients, social-networking sites and blogs.

- **The resource level,** which includes access to authentic materials, such as online newspapers, magazines, language tutors and dedicated websites for learners.
- **The component technology level,** such as spelling checkers, grammar checkers, electronic dictionaries and other support tools.

2.3 Instances of Technology use in Teaching Language Skills

1- Pronunciation and Speaking

- **Synchronous (real-time) computer-mediated communication,** such as chatrooms and various other types of near-instantaneous interaction (for example, microblogs), shares a number of the characteristics of spoken language, by providing practise for conversational skills in a setting that many learners see as non-threatening.
- **Spoken interaction:** Programs such as Skype, Whats app, Messenger, Google meet, and Google Hangout® enable communication between two or more individuals with video. Programs might be especially beneficial for students, since the added visual information assists them in comprehending the message.
- **Observing how interactions take place:** The student may watch video clips of real or simulated interactions (e.g. checking into a hotel), and then play the part of either of the participants in the interaction.
- **Comparing spoken texts:** Some websites allow students to record a spoken text, such as a story, a conversation or an oral presentation. Students can then compare their production with the speech of a native speaker.

2- Listening

Internet can aid the performance and design of listening skills through:

- **Providing resources for L2 learners:** Sites source which provides specifically created for L2 learning are accessible, including a selection of categorized listening or visual texts, as well as tools like subtitles, glossaries, captions, transcripts, and comprehension tests.
- **Authentic resources with learner support:** Several websites offer a range of listening text kinds (advertisements, movie clips, YouTube videos) as well as listening comprehension exercises. Authentic listening resources in the form of news broadcasts, TED Talks, interviews, and TV programmes, with no learner help: authentic listening materials in the form of news broadcasts, TED Talks, interviews, and TV shows, with no student support. The instructor can then plan activities for the students.

3- Reading

Internet offers good opportunity in enhancing reading by increasing the rates of the following abilities:

- **Practice speed-reading** (Fluency) with texts that increase in length and difficulty to improve fluency.
- Sentence and text awareness activities: These are activities that help students become more aware of the grammatical and discourse arrangement of texts.
- Timed components, immediate or delayed feedback, and model responses are some of the activities that may be used to prepare students for the reading portion of standardised examinations.
- **Reading skills practise**: chances to practise a variety of skills such as skimming, scanning, inferencing, and summarising, with some software underlining significant areas of the text with explanations.
- **Text-completion** challenges require students to read a text, estimate missing words, and receive feedback on their choices.

4- Writing

Internet sources can aid students and teachers in many ways:

- **Learner support:** Web-based writing labs to help students with writing assignment.
- **Sharing and showcasing work:** Students can share their compositions through desktop publishing or through sharing via a blog or web publishing.
- **Computer-mediated peer review:** Students can share drafts of written work, for example, in the form of blog posts that other students can then comment on.
- Collaboration on writing assignments, such as Wikis, makes the process of creating ideas, drafting, and revising a work more dynamic.

- Personal writing: Blogs allow students to write more personal and expressively, as well as compare and contrast their blogs with those of other authors.
- Dictionaries, spelling checks, and model texts are examples of editing tools that may help students write better.

2.4 Recommendations for Successful Technology Incorporation

The researcher makes the following recommendations to assist learners in developing their language abilities through the use of technology:

1. Teachers should develop a technology strategy that takes incorporation tactics into account in addition to purchase selections (Pourhossein et al., 2013).

2. Professional development should be prioritised in order to ensure learners' success and to alter the attitudes of instructors who are unfamiliar with the benefits of technology.

3. The technology plan should be tightly connected to the curricular standards. Teachers should be aware of the most successful pedagogical strategy when bringing technology into the classroom.

4. Computer technology is a vital element of the learning activity that transfers skills to students.

5. Language teachers should encourage their students to use technology to further their language skills development.

6. Universities should prioritise technological integration into their teaching and learning programmes.

7. Technology specialists should give further support to instructors who use technology into their English classes.

8. Teachers should set an example for their students when it comes to computer technology use (Pourhossein et al., 2017).

9. Teachers should develop instructional materials that include technology. These products should be centered on teaching and learning, not just on technological concerns.

10. Teachers should explore how technology might assist them in moving away from teacher-centered education toward learner-centered instruction.

11. Teachers must be conscious of their duties as facilitators and guides of their students' learning (Pourhossein et al., 2017).

12. To encourage technology integration, instructors should get adequate guidance and technical help.

13. Teachers should receive training on how to successfully use and teach it.

14. Teachers should seek assistance from their peers who can assist them in improving their instruction through the use of technology.

Section Three: Technology in Designing the Iraqi Curriculum

3.1 Technology in the Iraqi's Curriculums

The Internet is regarded to have a significant impact on the design of foreign language curriculums in the sense that it may alter the roles of both teachers and students (Larsen-Freeman & Freeman, 2008) by transferring some authority and control to the learners. To begin, it is clear that the teacher's position as a source of knowledge and the student's function as a receiver of that information have moved dramatically. Students have access to vast quantities of knowledge through their self-access internet facilities and, unlike the instructor, have more time to investigate it. With the Internet, learners will gain more autonomy as active shapers of the knowledge and information they acquire. The Internet may be very freeing for both teachers and students, and therefore has a considerable impact on a course's curriculum (Altae, 2020).Iraq was left behind for many years in terms of educational advancements as a result of the penalties. Iraq was also excluded from educational advancements that had begun to be introduced in schools in other neighbouring nations. The country's isolation from 1991 to 2003 also prevented the implementation of new curricular advancements, particularly in English language classes, where teachers could have accessed hundreds of web resources to assist their students in an interactive classroom. "Iraq was isolated from global trends in education" (Gordon, 2010, p. 39). Additionally, the government's security concerns during those years of isolation complicated the problem, and Iraqis during those years (1991–2003) were unaware of the Internet, mobile phones, and satellite television channels, which kept them in the dark about the rapid development of ICT occurring throughout the world (Altae, 2020).The war on Iraq (the American invasion) in 2003 represented a turning point in the liberalisation of the technology sector, as well as the start of the country's new stage of English language curriculum. To adapt to the "new" Iraq, a new English Language Curriculum and books were required. The Internet became available across Iraq, and many Iraqis, particularly teachers, gained access to the internet in their homes. Iraqi teens and students began using their smart phones to access the Internet. "As with other countries, cell phone and Internet use have increased

significantly since 2003. All of this had an effect on how Iraqi education authorities saw the English language curriculum, simply because they grew more receptive to the outside world and the bar for an English curriculum rose (Altae, 2020).The general directorates of education in each of Iraq's 18 provinces, which were affiliated with the Ministry of Education, exercised executive authority over education. These directorates made some modest attempts to establish education and training plans that incorporated educational technology, attempting to provide teachers with the necessary components to meet the training needs of various educational settings and organising and implementing educational programmes in schools, which they hoped would include teacher training programmes such as "new teaching methodologies for all Iraqi school teachers" (UNESCO, Office for Iraq, p. 1).In 2010, the Ministry of Education published a set of textbooks titled "Iraq Opportunities" for the English Language curriculum. However, these works had difficulties in their reception by English instructors. Instructors were not contacted about the book prior to its publication, and it was discovered that it did not fit the style of Iraqi English language teachers, i.e., the teachers were not taught to utilise that particular kind of book, which emphasised dialogue and complex syntactic characteristics. Teachers began complaining to the Ministry of Education about the "Iraq Opportunities" series early through the year (2010). Several teachers expressed concern about alleged difficulties in teaching the textbooks, their concern about learners' comprehension of the materials, which they perceived to be higher than the realistic level of Iraqi school students, and their confusion with the results of students failing to earn a pass grade. This indicated a lack of preparation on the part of the Iraqi Ministry of Education prior to adopting the curriculum, as well as a dearth of training opportunities for teachers to address the difficulties they encountered while working with the books, not to mention the lack of resources available to English Language teachers (Altae, 2020).Thus, in 2012, the Iraqi Ministry of Education hired professionals from the United Kingdom and Iraq to create a new curriculum and accompanying books, which were produced in Lebanon and dubbed "English for Iraq." The textbooks were supplemented with resources, which included a teacher's book, a teacher's guide, a student's book, a student's activity book, a handwriting book, and a CD for instructors to download that had all of the tales for students to listen to in class. Year 7 students were introduced to "English for Iraq" textbooks, followed by Year 8 students the next year, and so on. Once again, without examining why past books failed to meet their aims, new ones were introduced without enough collaboration with the major education stakeholders. Soon after, teachers began to voice their dissatisfaction with the additional step of modifying the curriculum without consulting them again or providing essential training for secondary and elementary teachers. The Ministry of Education, with the assistance of publishers, established training programmes in Lebanon that were ineffective at educating teachers because they were limited to a small number of instructors and excluded the majority, particularly those who worked in Iraqi areas. 'English for Iraq' is still in use at the time, and Iraqi instructors continue to struggle with the curriculum (Altae, 2020). Yet, it is worth noting that even though technology is well integrated in the current curriculum; the major concern is the competent teacher who activate and reinforce this trait.

Conclusions

The researcher discussed a number of critical concerns concerning the use of technology in language acquisition. According to this study:

- teachers should be convinced of the value and benefits of technology in enhancing students' learning. This implies that instructors require assistance and training in order to integrate technology into language instruction.
- The research concluded that when technology is used effectively, it may provide several benefits to instructors and students. It is a resource that learners may utilise since it assists them in resolving their learning challenges and determining effective and meaningful ways to apply what they have learned.
- Learners should utilise technology to improve their language abilities since it contributes significantly to the development of learners' creativity and gives them with engaging, fun, and exciting ways to study the language.
- Integrating technology in the curriculum design is useless if the teacher is incompetent to engage in technology and use it to support and implement lessons.

Thereby, the aim of the study is now achieved.

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