The Pros and Cons of Computer Technology in the Classroom from Teachers' View

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Abstract

Nowadays, Computer-assisted instruction is a symbol of technology (CAI). Although more research is showing that CAI improves learning outcomes, several studies have found no effects at all or detrimental consequences. This study looks at the causes of these variations and, more crucially, what has to be in place to guarantee that CAI improves learning outcomes. Research questions: (1) What are CAI benefits? (2) what are CAI cons? (3) what are the factors influencing the results of CAI interventions?. The aims of the present research are: answering the research questions as well as showing the pros and cons of CAI and presenting factors influencing the results of CAI interventions. To achieve these aims, it is hypothesized that: (1) CALI has significant pros. (2) CALI has significant cons. (3) There are eleven factors influencing the results of CAI interventions. The procedures that followed in this study are: (1) presenting a comprehensive description of CAI. (2) making teachers' questionnaire and conducting interview with teachers. (3) analyzing the data. The most significant outcomes are as follows: One of CAI's benefits is that it offers individualized attention, encourages active engagement and the usage of the target language, and simplifies difficult subjects. The drawbacks of CAI include potential cost, implementation challenges for educators, and activities that do not necessarily align with the objectives of the teacher. The operating environment, stakeholder engagement, infrastructure, technological trust, CAI tool design, content creation, student engagement, classroom integration, teacher capacity, student

capacity, and data collection and use are the eleven factors that affect the outcomes of CAI interventions. Furthermore, the main benefits of CAI are its ability to provide students with instant feedback and a variety of alternate teaching methods; on the other hand, its main drawbacks are its isolation from human interaction and high initial cost.

Key Words: computer- assisted instruction, pros, cons, interventions, significant. .

إيجابيات وسلبيات تكنولوجيا الكمبيوتر في الصف الدراسي من وجهة نظر المدرسين

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الملخص

في الوقت الحاضر، يُنظر إلى التعليم بمساعدة الكمبيوتر باعتباره رمزًا للتكنولوجيا. وعلى الرغم من أن المزيد من الأبحاث تُظهر أن الكمبيوتر يحسن نتائج التعلم، إلا أن العديد من الدراسات لم تجد أي تأثيرات على الإطلاق أو عواقب ضارة. تبحث هذه الدراسة في أسباب هذه الاختلافات، والأهم من ذلك، ما يجب أن يؤكد ضمان أن الكمبيوتر يحسن نتائج التعلم. أسئلة البحث: ١- ما ايجابيات التعلم بالكمبيوتر؟ ٢- ما سلبيات التعلم بالكمبيوتر؟ ٣- ما العوامل التي تؤثر على نتائج تدخلات الكمبيوتر في عملية التعلم؟ اهداف البحث الحالي: الاجابة على اسئلة البحث فضلا عن اظهار ايجابيات و سلبيات التعلم بمساعدة الكمبيوتر وتأكيد العوامل التي لها دور في نجاح او فشل التعلم بمساعدة الكمبيوتر. الاجراءات التي اتبعت في هذه الدراسة هي: ١- تقديم وصف شامل للتعلم بالكمبيوتر. ٢- عمل استبيان للمعلمين. وعمل مقابلة معهم لمعرفة آرائهم لمدى فعالية التعلم في أنها بالكمبيوتر ٣- تحليل البيانات. النتائج الاكثر اهمية هي كما يأتي: تتمثل إحدى فوائد توفر اهتمامًا فرديًا، وتشجع على المشاركة النشطة واستخدام اللغة المستهدفة، وتبسط الموضوعات التكلفة المحتملة، وتحديات التنفيذ للمعلمين، والأنشطة التي لا تتوافق الصعبة. تشمل عيوب بالضرورة مع أهداف المعلم. البيئة التشغيلية، وإشراك أصحاب المصلحة، والبنية الأساسية، والثقة ، وإنشاء المحتوى، وإشراك الطلاب، ودمج الفصول الدراسية، وقدرة التكنولوجية، وتصميم أداة المعلم، وقدرة الطلاب، وجمع البيانات واستخدامها هي العوامل الحادية عشر التي تؤثر على نتائج

هي قدرتها على تزويد الطلاب وعلاوة على ذلك، فإن الفوائد الرئيسية لطرائق تدخلات بملاحظات فورية وخبرات متنوعة التدريس البديلة؛ من ناحية أخرى، تتمثل عيوبها الرئيسية في عزل الطالب عن التفاعل البشري والتكلفة المادية المرتفعة.

الكلمات المفتاحية: التعليم بمساعدة الحاسوب، الإيجابيات، السلبيات، التدخلات، العوامل البارزة.

1. Introduction

1.1. The Problem of the Study

Secondary students lack the foundational knowledge and abilities needed to learn the target language. This is mostly due to three factors. First, there are not enough teachers to meet the needs of the students. Secondly, educators lack sufficient training. These educators do not have the necessary foundational pedagogical abilities and subject-matter expertise to offer pupils engaging learning opportunities. Third, there are inadequate and uneven professional development frameworks that prioritize theory over practice. Despite the fact that CAI is more interactive, engaging, and provides instant feedback, some schools simply cannot afford to provide a computer for every student, and it might be challenging to locate one that precisely meets the demands of teachers. Computers, electronic devices, and software are expensive.

1.2. Research Questions

1- What benefits does CAI offer?

2. What drawbacks does CAI have?

3. Do the benefits of using computers in the classroom outweigh the drawbacks?

4. What elements affect the way CAI interventions turn out?

1.3. The Aims of the Study

This study aims at:

1- Highlighting the benefits of CAI.

2. Outlining the drawbacks of CAI.

3. Determining which benefits or drawbacks of CAI outweigh the other.

4. Examining the variables affecting CAI interventions' outcomes.

1.4. The Hypotheses of the Study

It is hypothesized that:

1- CAI has a number of noteworthy advantages.

2. There are a lot of drawbacks to CAI.

3. There are more benefits than drawbacks to using computers in the classroom.

4- Eleven variables affect how well CAI interventions work.: the operating environment; stakeholder engagement; infrastructure; technological trust; CAI tool design; content creation; student engagement; classroom integration; teacher capacity; student capacity; and data collection and use.

1.5. The Procedures of the Study

1- Presenting a comprehensive description of CAI.

2- Making teachers' questionnaire to discover the strong and weak points of CAI.

3- Conducting a review with secondary teachers to know their bout opinions CAI.

4- Analyzing the data of teachers' questionnaire to specify the factors influencing the results of CAI interventions.

2. Computer –Assisted Instruction for Language Learning

CAI includes a wide range of concepts and technology. "the use of computers and other electronic devices to learn and to deliver educational instruction." In a broader sense, CAL encompasses the usage of gadgets like DVD players, CD and MP3 players (formerly known as record players in the 1960s), tablets, cellphones, and televisions. These resources can enhance student involvement or serve as a better example of a topic the teacher is attempting to make. Online courses and additional course resources for homeschooling, distant learning, and colleges are also included in CAL. Basically, the CAL covers pretty much every technology that can be utilized for learning. (Yunusa, 2014:56)

The ways that people behave at home, at work, and in schools are evolving along with the world. These developments are mostly the result of how quickly technology has advanced. Computers have a significant impact on people's lives, from email to online learning, and they can improve education in many ways. It is imperative that administrators support and promote the use of computers in our educational systems given their growing popularity. Computers are crucial to education because they make people reevaluate their methods of learning, their sense of empowerment, and the nature of knowledge and meaningful information. (G. Bulman and R. W. Fairlie, 2015: 87).

Because computers are requiring educators to reconsider the very nature of what and how they educate, teachers are unable to resist having them in their classrooms. According to Provenzo, Brett, and McCloskey (1999: 34), the Office of Technology Assessment estimated that there were 5.8 million computers in US schools in 1998, or roughly one computer for every nine students. The ability of the computer to act as a tutor is one benefit of computer-assisted instruction in the classroom. There is only so

much a teacher can do to support their students' learning. Computers can help teachers and serve as a tutor for pupils who are not keeping up as well.

The lack of literacy in the world today is one of the main issues. Thousands of children who read at the elementary school level or not at all graduate from high school each year. Every kid needs to be given the chance to get more help when he or she needs it. While technology can reach pupils that teachers cannot, teachers are doing their best to address literacy challenges in the classroom. Bennett (1999: 54) shows that in spite of spending years in the New York City school system, Annaben Thomas—the subject of the essay "Computers as Tutors"—was unable to read. In an effort to overcome her disability, she enrolled in adult education classes and library literacy programs after graduating from high school, where she received tutoring. Despite her best efforts, she was still unable to read until she enrolled in a computer course program that taught her to read and write. Because of success stories like this it is crucial to support the use of computer technology in the classroom.

2.1. Applications of CAI for Language Learning

Although CAI can be used in any classroom, language learning environments are where it is most helpful. In fact, foreign language teachers are starting to favor it as a teaching tool more and more. The following are some ways that CAI can support language learning in students:

2.1.1. Visual Learning:

Students can visualize what their teachers are teaching them by searching for images of fruits, animals, or colors on the internet. This helps

them match the words they are learning with the right images. Students can also see examples of how native speakers utilize words and syntax by using FluentU or any similar tool. Videos featuring native language usage are featured on FluentU, along with interactive subtitles that allow students to seek up definitions, sample sentences, usage advice, and other information. (Bennett, 1999:3)

2.1.2. Listening Exercise

Practicing listening is essential to learning any language. By enabling students to, for example, play interactive audio made for English language learners, CAI assists with this. Students will pick up on pronunciation in addition to listening to the language being used spontaneously. After that, they can mimic the speakers and discover how to talk in their new language.

2.1.3. Tests

Teachers can design their own tests using CAI technology, and students can take them on the school computers. Exam materials are also available online for use by teachers, who can incorporate them into their classes. Additionally, there is very little delay between instruction and assessment when using apps like Duolingo, Memrise, and Brainscape because students receive feedback almost immediately. Boyle (1998٥٤:)

2.1.4. Games

One of the best methods to incorporate CAI in the classroom is probably through the use of games. Younger language learners frequently like playing video games and solving puzzles in the language they are learning. To them, it feels less like learning and more like fun. They won't even be

aware that they are getting smarter since they will be so busy trying to advance to the next level.

2.1.5. Online Courses

Online courses may be a part of CAI. These courses may be completed at home on one's own schedule, perhaps in addition to a full-time college course load. They can also be used in addition to a language course that is taught in a classroom. Many of the hundreds of commercial and free language courses available online can be quite successful.

2.1.6. Communication with Native Speakers

Providing access to native speakers is one of technology's most significant advances to language acquisition. Working with native speakers is made possible by technologies such as Skype and Italki for language learners.

2.2. Pros of CAI for Language Learning

2.2.1. Attending to the Individual

Every student has the freedom to study whenever and wherever they choose with CAI. Each learner can have a more customized experience with computer classes or activities because they often adjust to the individual based on their own development rather than a predetermined standard. Additionally, it is simple to adjust for variations in learning styles, required language proficiency, pacing, and learning schedules. (Pawson and Associates, 2004:13)

2.2.2. Encouraging Engaging Conversation and Target Language Usage

Making verb charts and repeating words while seated in class is acceptable. But when that information is applied in a real-world scenario—or, at the very least, one that mimics or is similar to a genuine situation—true learning occurs. Learners who actively utilize the language they are attempting to acquire are more likely to retain specific vocabulary. The fact that computers require input to function gives them an advantage over human teachers. They are therefore interactive by nature. Interactive refers to the ability of the computer to react to clicks or touches. The technology is sufficiently flexible to let the learner make most of the decisions during the course. Additionally, students have a choice in the subjects they study.. The computer complies with their requests if they wish to click ahead or back. (Boyle,1998:76)

2.2.3. Permitting Students to View Their Development

Even when there are no classes or when the teacher is not present, CAI can be used. The current generation of language learning technology is student-initiated and student-centered, providing ample opportunity and time for pupils to practice. One can practice their language skills whenever they like, in the comfort of their own room. The best part is that kids are able to do all of this without worrying about receiving unfavorable feedback from others. Additionally, students feel like they're doing well every time they figure out a puzzle or advance to the next level in an online course or game, which keeps them interested in the material. They will receive findings from the computer or app automatically, which can inspire. (Bennett, 1999:6)

2.2.4. Dividing Difficult Subjects into Manageable Bits

Teachers sometimes find it difficult to break down difficult subjects into manageable portions before moving on because they are unsure of the most effective approach to do it. On the other hand, educational computer games and resources can simplify complex concepts into digestible bits that are easier to learn and remember. Furthermore, CAI is built to adhere to a preset set of algorithms and is devoid of any subjective biases. That is, the application moves on to more challenging content if a user demonstrates mastery over particular subjects or vocabulary. It repeats the information if they haven't yet internalized this knowledge until it determines that the user has demonstrated. (Pawson, 2006: 94 and Wong, Westhorp et al., 2013:76)

2.2.5. Assisting in Reiterating Lessons Without Being Boring

The lessons and activities a teacher uses in the classroom can also be reinforced via CAI. Rather than pasting cut-outs and visual aids on the board, educators can use the multimedia lessons available in CAI when they need assistance making their teachings more vivid and when they need the concepts to come alive. Furthermore, CAI is unaffected by human limits. Programs, films, and apps from CAI can be used repeatedly without losing their effectiveness. Thus, long after the teacher has left for the day, students can continue to review and study the material.

According to a study titled Computer Advantages: Tutoring Individuals, "no student will be overwhelmed because he or she is missing fundamentals when computers are used as tutors." The machine will keep repeating the content until every lesson is fully understood." (Bennett, 1999:. 3). Instructors don't have the time to go over lessons again and again. Giving every student in the classroom the chance to fully absorb the material is crucial, and they can do so by using computers as tutors. Success

stories like these make it imperative to advocate for the integration of computer technology into the classroom.

2.2.6. Captivating and Interested

To be honest: A disinterested pupil is not a good one. While some students find lectures lasting an hour tolerable, others might need more engagement and stimulation to keep engaged and studying actively. Because CAI provides numerous avenues for each student to participate and maintain interest in the subject matter, it is ideal for this. . (Owusu et al., 2010: 53)

2.2.7. Giving Prompt Feedback.

CAI programs are able to provide immediate feedback since student interaction is constantly documented. Additionally, it keeps up-to-date progress logs and reporting frameworks for research publications and quick reference. Students can progress through a subject more quickly in this method because they can recognize and learn from their faults immediately. (Yunusa et al., 2019: 35)

2.2.8. Having a More Tailored Approach

Although improving the quality of instruction is a top concern, training teachers is challenging and time-consuming, and improvements in learning outcomes are usually not realized for years. Today, students need a better education immediately; they can't wait years for better teachers. An immediate substitute for long-term teacher development is needed by students. Computer-assisted instruction is one possible substitute that might have a favorable impact on student learning outcomes (CAI). Scholarly publications as well as materials written by practitioners use different interpretations of the CAI term. For instance, in their most recent fast evidence evaluation on adaptive and personalized learning. Major and

Francis (2020: 85) observe that there is a vocabulary overlap between intelligent tutoring systems, cognitive tutoring systems, computer-assisted learning, computer-aided instruction, and computer-assisted learning.. (Bulman & Fairlie, 2015: 22)

2.3. Drawbacks of CAI

Even if there are more benefits than drawbacks to using computers in the classroom, it is important to acknowledge and honor those who have reservations about this practice. Many contend that kids are not given the chance to fully process what they have learned because the computer does all the work for them. Information technology "may actually be making us stupid," according to Boyle (1998: 618). He demonstrates how kids' ability to think is diminished further by the computer. Many of us who grew up before computers are concerned that using computers in the classroom will dehumanize the students. "The pre-computer age generation envisions designing computer technologies that still" (Wehrle, 1998:5) They do not want the student's need for human support from teacher-based learning to be hampered by the rapid advancement of computer technology. CAI's drawbacks can be summed up as follows: (Pawson & Tilley, 1997)

2.3.1. Being Pricey

The largest obstacle to using CAL in the classroom may be its cost. Software, electronics, and computers can be costly. As a result, some classrooms simply cannot achieve the aim of providing a computer for every student. Allowing the pupils to use their personal laptops or smartphones for language instruction is one approach to get around this. But not all of them are able to use these gadgets. (Robert et al., 2012:5)

2.3.2. Being Challenging for Instructors to Adopt

Anything that involves electronics by nature becomes more complex, at least at first. Before allowing their students to use computers or cellphones, some teachers may need to learn how to use them themselves, which can take up a lot of valuable time. Teachers need to understand how to operate the software in addition to the hardware. Not only should they verify the functionality, but they should also look for any flaws or defects that could prevent their students from fully utilizing the software. (Lipson & Smith, 2013:54)

2.3.3. Not All Activities Align with the Teacher's Objectives

Finding a program, video, or lesson that precisely suits a teacher's needs and teaching style can be challenging. There will be instances where an online quiz lacks the precise terms that educators wish to assess their students on. It's possible that not all of the speech components that educators should emphasize are included in the video that they are viewing. It can be challenging for teachers to strike a balance between incorporating CAI into their classes and not allowing it dominate what is taught. Additionally, before utilizing the CAI technology in the classroom, teachers must verify the content it presents. The very last thing educators desire is an embarrassing (Bennett, 1999:6)

2.3.4. Causing Students to Feel Alone

Envisioning a classroom full of pupils, everyone seated at a computer, communicating just with the computer in front of them and not with each other. Socializing is a crucial aspect of language use, because social interaction is how people pick up new language skills. Stated differently, peer assistance is essential for pupils to learn, and CAI may impede this process. Even yet, when used in the classroom, CAI may be a fantastic teaching tool. CAI has the power to completely change the way students

learn language and other subjects by utilizing technology to enhance the curriculum rather than to replace it. (Pawson et al., 2004, p.13)

2.4. Elements Affecting CAI Intervention Outcomes

It's critical to emphasize the following elements that affect whether CAI can lead to better learning outcomes:

2.4.1. Environment of Operation

Successful CAI interventions are based on an understanding of the operational environment and making sure that the tool and solution are tailored to correspond with it. According to Trucano (2016:32) & Carlson (2013:87), examining a wide range of social, cultural, economic, and religious factors is necessary to understand the functioning environment. It also necessitates producing in-depth analyses of the educational system. This could entail learning about the educational landscape, curriculum design, pedagogical approaches, and developments in school infrastructure, among other things (Chris, 2015). Having a thorough grasp of the operating environment will help to guarantee that the CAI intervention is appropriate for the local context, which will promote user adoption and reduce resistance from the larger education community. On the other hand, a crucial failure of CAI interventions may result from a lack of awareness of the national or local operational environment.

2.4.2. Stakeholder Engagement

According to Hsu et al. (2013:76) and Trucano (2016:87), gaining a grasp of the operating environment as the first step will guarantee that program designers are aware of which stakeholders are most crucial to interact with and what kinds of engagement strategies will work best in the particular setting. Stakeholder engagement offers a number of advantages

that are expanded upon during the creation and implementation of CAI initiatives. More understanding of the local operational environment may be gained through engagement, and this understanding can then be used to shape the design of the CAI tool as well as its implementation (including communication and training). It has also been discovered that stakeholder involvement offers chances to cultivate champions who can speak up for CAI and inspire trust. (Rose, 2002: 97)

2.4.3. Infrastructure

To deliver the program, intervention designers need to make sure the right infrastructure is in place. It is important to remember that in certain circumstances, basic infrastructure like power and the Internet, cannot be taken for granted (Carlson, 2013:34; Trucano, 2016:8). The hardware that is utilized needs to be carefully considered; in particular, tablets should be recommended as an alternative to smartphones and desktop PCs. Whichever technology is chosen, additional concerns like how the devices will be secured and how continuous assistance (technical and instructional) will be delivered must also be taken into account. Understanding the local operating environment and incorporating extra information from stakeholders during the engagement phase should inform all infrastructure decisions.

2.4.4. Technological Trust

According to Masingila et al. (2018:21), instructors are more inclined to incorporate technology into the classroom when they have faith in its ability to enhance learning outcomes. In order to foster trust among local stakeholders, including parents, teachers, and kids, stakeholder engagement processes are essential. The goal of the CAI intervention designers' consideration of technological trust development is to guarantee

that users and stakeholders have the necessary level of technological confidence in order for them to be willing to test the program. Furthermore, consumers are more likely to be resilient enough to overcome obstacles that arise during adoption and mainstreaming if they have higher levels of technological confidence.

2.4.5. Designing CAI Tool

An extensive, interactive, and captivating CAI tool design is necessary to guarantee that educators and learners have a good experience that promotes continuing use. (Owusu et al.(2010:56) emphasize important elements that should be considered when creating the CAI tool to increase teacher and student adoption. The tool must have a user-friendly interface, make use of a variety of media, facilitate autonomous and self-paced learning, offer quick feedback, and have few technical issues. Furthermore, adaptive peer group construction, intelligent collaborative learning facilities, adaptive navigation, and adaptive information filtering are all suggested to be features of superior CAI tools by Brusilovsky & Peylo (2003:8) Istance & Paniagua (2019:3).

2.4.6. Material

It's interesting to note that not many empirical writers gave a thorough explanation of the material that students were exposed to via the CAI tools they were using. While a few researchers (Owusu et al., 2010) and Yunusa (2014) highlighted the importance of high school secondary level technology, respectively, others mentioned subjects and grade levels, none of the empirical researchers went into great detail about the kind of content that was used with the CAI tool. According to Evans & Popova (2015: 13), computer-assisted learning programs are unproductive "when technology distribution is unaccompanied by parent or student training" or "when

instruction is not tailored to each student's level of knowledge." CAI needs to have relevant, high-caliber instructional material. Therefore, the content of CAI tools should be related to (Evans and Popova, 2016:8; Owusu et al., 2010:44 and Power et al., 2014:43)

2.4.7. Student Engagement

One of the most crucial steps in utilizing CAI to improve learning outcomes is making sure students desire to utilize the program. According to Carlson (2013:33) and Muralidharan et al. (2019:7), there is a correlation between providing students with relevant content and increased student engagement. According to Lai et al. (2012:3), using CAI was essential for raising learning outcomes as well as student interest in other subjects in addition to the subject that the CAI intervention was used to assist. Teachers may make sure students receive suitable information at different levels by using the CAI. Ensuring that students have access to relevant content helps foster student engagement, which can improve learning results.

2.4.8. Integration

It's critical to stress that CAI tools are an adjunct to instruction. Teachers shouldn't be their primary focus. To achieve better learning outcomes, it is essential to make sure CAI tools are properly incorporated into the teaching and learning process. According to Istance and Paniagua (2019:8), the best way to integrate CAI tools can depend on the local context, which includes factors like the quantity of instructors and their capacity. This underlines once more how crucial it is to have a thorough grasp of the operational environment and interact with regional stakeholders to comprehend regional needs. One of the most important components of a well-designed

CAI intervention is facilitating integration. Supporting differentiated instruction in a packed classroom or assigning material to teachers who lack the necessary expertise are two examples of integration in action.

2.4.9. Teacher Capacity

At the heart of any CAI intervention is ensuring that teachers receive the necessary training to apply CAI effectively. Once they have decided how the CAI tool will be incorporated into the teaching and learning process, teachers need to be taught to make sure they are capable of using it in accordance with the designers' intentions. (Trucano, 2010:7) and (Tondeur et al., 2017:9) underline how important it is to recognize and develop the talents that educators require. The practical aspects of using the tool, such as how to operate the device, instruct students in using CAI, obtain continuing technical assistance, and—above all—integrate the tool into computer-assisted instruction (CAI) in the classroom, should be covered in training. According to Trucano (2016:6), teacher preparation programs can also done.

2.4.10. Student Capacity

Determining if students have the ability to use the tools is just as critical as making sure teachers are properly equipped for their part in CAI interventions. According to Yunusa (2014:87), the majority of users in the empirical trial lacked the abilities or competencies necessary to interact with the content that was presented to them, which made it more difficult for the tool to enhance learning results. Gaining insight into students' abilities is again connected to comprehending the working environment and speaking with local stakeholders. The CAI tool (as well as the information inside it) must be created with the student capacity in mind

once it has been established. Instructors must to be prepared to instruct pupils in the usage of the CAI tool.

2.4.11. Data Collection and Use

The capacity of CAI systems to gather, process, and report data in a variety of ways is a potent advantage. This can involve gathering student data to facilitate differentiated instruction, gathering CAI usage statistics to help central level actors monitor the program, producing insights to guide teacher preparation, or utilizing CAI to grade students. (Trucano, 2016:8)

In addition to providing information for assessments of implementation quality and fidelity, data collection can facilitate iterative modifications when implementation lessons are discovered. (Carlson, 2013:8; Piper et al., 2018:87 and Power et al., 2014:8) highlighted the fact that using CAI produces a variety of results and that improving learning is still at the core of every CAI intervention's design. It is critical to emphasize that effective CAI deployment requires more than just creating.

3. Techniques and Processes for Gathering Data

It is recommended by Saul et al. (2013:3) to start realist research by talking to "content experts and knowledge users." In public secondary schools in Iraq, a survey was carried out in January and February of 2024 utilizing a questionnaire that was given out after in teacher interviews.

3.1. Subjects

According to Hughes (1996, 44) and Al-Samawi (2000, 111), the sample needs to encompass all of the given information. According to Richards et al. (1992, 282), a sample is any group of objects, people, etc. that have certain common and crucial traits. The distribution of (117) randomly selected teachers from Iraqi secondary schools is displayed in Table (1).

Tables 2, 3, and 4 display the distributions of age, gender, and years of teaching experience.

Table 1. Participants' Teaching Subjects in Iraqi Schools

Subjects	No. of teachers	% of total
English	46	39.3
Science	38	32.5
Mathematics	24	21
Others	9	7.7

Table 2. Gender of Teachers in Iraqi Schools

Gender	No. of teachers	% of total
Male	75	64.1
Female	42	36

Table 3. Age of Respondents

Age	No. of teachers	% of total
21-30	41	35
31-40	33	28.2
41-50	34	29.1
>50	9	7.7

Table 4. Years of Teaching Experience

Years of teaching	No. of teachers	% of total experience
1-10	62	53.0
11-20	23	19.7
21-30	26	22.2
>30	6	5. I

3.2. Instrument

The researcher constructed a rating scales questionnaire, which was given to secondary school teachers. The questionnaire included thirty questions that represent advantages, disadvantages, and factors influencing CAI interventions. The participants were given both open ended and alternative answers to the open ended and "True" and "False" questions, respectively. The purpose of the interviews that conducted with both teachers and students was to gather data that corroborated the students' responses and to illustrate the teachers' personal viewpoints that reflect the advantages and disadvantages of CAI as well as the factors influencing on the CAI interventions.

3.3. Use of Computers

Tables 5, 6, and 7 display the frequency of computer usage, the availability of computers at home, and the involvement in computer education.

Table 5: Frequency of Computer Usage at Home

Do you have a computer at home?	**Yes**	**No**
	79.5 %	20.5%

Table 6: Involvement in Computer Education

	Yes	**No**
Are you involved in teaching computer awareness or in the use of computers in your school?	21.4%	78.7%

Table 7: Frequency of Computer Usage

How often do you use computers?	**Frequently**	**Sometimes**	**Rarely**
	39.3%	39.3%	21.4%

Frequently: >10 times per month; Sometimes: 3-10 times per month; Rarely: <3 times per month.

3.4. The Usefulness of CAI

Participants were asked to share their thoughts on CAl's utility. ("To what extent do you think CAI is useful as a teaching/learning tool?"). As Table 8 illustrates, the majority of respondents said that CAI is helpful.

Table 8:Perceived Usefulness of CAI

To what extent do you think CAI is useful as a teaching/learning tool ?	Not at all useful	Somewhat useful	Useful	Very useful
	2.6 %	36.8 %	50.4 %	10.3 %

3.5. Discussion

1- Perceived advantages of CA1

The way teachers prioritized the perceived benefits of CAI is displayed in Table (9).

Table 9: Perceived Advantages of CA1

Statements	Yes %	No %
1- Giving students feedback right away	75.3	24.7
2- Offering different teaching methods (like simulation)	73.4	26.6
3-The machine showed boundless tolerance	68.3	31.7
4. Tailored education	65.8	34.2
5. The capacity to run simulations	64.1	35.9
6. Giving directions as needed	63.2	36.8
7- Students' positive perception of CAI	62.5	37.5
8- Providing thorough student records	62.3	37.7
9- Giving teachers more time to work on particular issues	61.5	38.5

In table (9), CAI advantages are arranged from the highest advantage (Giving students feedback right away, 75.3) to lowest one (Giving teachers more time to work on particular issues, 61.5). Thus, there are significant advantages of CAI, the first hypothesis (There are significant pros of CAI.) is verified and the first research question (what are the pros of CAI?) is answered.

2. Perceived Disadvantages of CA1

Table 10: Perceived Disadvantages of CAI

Statements	Yes%	No%
I. Seclusion from social contact	55.8	44.2
2. A substantial financial commitment	53.7	46.3
3. Refusing to use educators as role models	50.5	49.5
4-Differing C AI packages use various commands	48.5	51.5
5- Low-quality software	43.5	56.5
6. Not adhering to the schedule of the classroom	40.3	59.7
7- Computer programs cannot be transferred between various machines.	38.2	61.8

The respondents ranked the belief that CAI separates students from social connection at the top of the list (55.8). This view is related to the controversy about the potential harm that utilizing computers for learning could do to society and the classroom. Many contend that students are deprived of the chance to socialize in a group setting by using computers. More understanding and assurance regarding CAI, nevertheless, might allay this worry. According to others, the second biggest drawback of implementing CAI was the significant capital investment that was necessary. When considering the deployment of CAI, schools need to be ready to cover the costs associated with development and expansion, including purchasing hardware and software, maintaining, servicing, and other costs. Teachers would not be able to serve as role models if CAI was implemented.. Thus, the second hypothesis (there are significant cons of CAI) is verified as well as the second research question (what are the cons of CAI?) is answered. By comparing The table(9) with the table (10), the percentages of advantages of CAI are higher than that of disadvantages. Thus, the third hypothesis (The advantages of computer technology in the classroom outweigh the disadvantages.) is verified as well as the third

research question(do the advantages of computer technology in the classroom outweigh the disadvantages?)is answered.

By conducting the review with teachers, the teachers emphasized the eleven factors that influencing the results of CAI interventions: the operating environment; stakeholder engagement; infrastructure; technological trust; CAI tool design; content creation; student engagement; classroom integration; teacher capacity; student capacity; and data collection and use. Thus, the fourth hypothesis (There are eleven factors influencing the results of CAI interventions: the operating environment; stakeholder engagement; infrastructure; technological trust; CAI tool design; content creation; student engagement; classroom integration; teacher capacity; student capacity; and data collection and use.)is verified as well as the fourth research question (What are the factors influencing the results of CAI interventions?) is answered.

4. Conclusions

1. To challenge the status quo and improve learning results, quick and creative changes in the way education services are delivered are needed. This study explores the potential function of CAIs in this process and, specifically, lists the benefits and drawbacks as well as the contributing variables.

2. The delivery of education services needs to adapt quickly and creatively in order to challenge the status quo and enhance learning outcomes. The possible part that CAIs might play in this process is investigated in this work.

3. It explicitly looks at the advantages and disadvantages of this strategy as well as the factors that could positively or negatively affect the changes in

learning outcomes brought about by CAI therapies. Political, cultural, and financial constraints impede the provision of education services.

4. The idea that a computer can handle a lot of the issues that teachers are unable to handle is one of the consequences of introducing computer technology into the classroom. These include assisting students in improving their performance on standardized tests, imparting real knowledge to kids in subjects like reading and listening, and suggesting that teachers possess the knowledge and skills necessary to correctly assist students in using computers.

5. Education is a portal through which our curiosity and imagination can soar into the unknown and expand our creativity; computer technology in the classroom is a huge aid in assisting kids in realizing their full developmental potential. It seems obvious that there should be a connection between the outside world and the classroom given the importance that education plays in preparing pupils for life after school. For pupils, education is meaningless if it doesn't correspond with the real world.

6. The benefits of computer technology in the classroom have been highlighted, and they exceed the drawbacks.

7. The use of computers in education can help close the gap with the technologically advanced world we live in. With the use of computer-assisted technology, students can access more material in the classroom, become more motivated to learn, gain a head start on employable skills, and produce better work overall.

8. Ultimately, it is the responsibility of each instructor to determine if computer-assisted language learning is appropriate for their particular classes.

9- Computer use in the classroom can be a fantastic opportunity to make advantage of new technology and improve the language learning experience, provided that the benefits and drawbacks are appropriately balanced.

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