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"Teachers and Students' Perceptions of Using AI- Supported Tools on Motivating Self -Learning towards English language Learning in Assiut City, Egypt"

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Abstract:

The present study aims to examine teachers and students' Perceptions of Using AI – Supported Tools and Apps as (Chat GPT, Reading Coach, Microsoft Teams, Microsoft Designer, Minecraft Education, Micro: bit and Merge Cube) on Motivating self -leaning towards English Language Learning in Assiut City Egypt. AI becomes a vital part in all our daily business life. It is the future industry for all learners and has become an attractive concept for researchers and professionals in education throughout the 21st century. This research intends to shed some more lights on this topic through comprehensive electronic training course called "AI for Educators" on Microsoft learn educator center.[1] This study motivates students to learn the four skills (Listening, Speaking, Reading and writing) easily with supporting of AI- powered Tools (AIT). This study employed Mixed Method Research (MMR). It includes quantitative and qualitative techniques. A questionnaire was done face to face with school classes, an Online survey (OS) was conducted to capture teachers' perspective technological knowledge in using AI-powered tools in class and Observation technique (OT) through Action Research (AR) to investigate the standard level of using AI- powered Tools among students. According to the results, participants positively perceived the use of AI- powered Tools to motivate and inspire students easily in learning aspects of English language as the four English skills and pronunciation. It is recommended to utilize these Apps and tools to inspire students to be creative, self- learners and contributors in solving - real world problem locally and globally

Keywords:

[1] Training Courses about AI Tools on Microsoft Learn Educator Center.
AI for educators - Training | Microsoft Learn

AI-Supported Powered Tools and Apps, Reading Coach, Minecraft Education, Merge Cube, Microsoft designer, Microsoft Teams, Micro: Bit and Action Research

1.Introduction:

The state of integrated Technology in teaching In Assiut City:

The researcher trained 3000 teachers in 2016 in different educational stages either (kindergarten, primary, preparatory or secondary) and (public, Experimental and Private Schools and STEM schools) . All trainees were distinguished from untrained teachers, but they faced lots of obstacles in applying technology inside their classrooms, related to out-of-date computer devices, internet or the daily routine of school timetables, only a few of teachers who managed to achieve some of the programmes. Some teachers create a presentation or interactive presentation to display a good achievement in a competition or display them in a special event. There are only three or five excellent students in each class who are distinguished from others, but the standard level of most of students in public schools in speaking English are low. There are not any challenges among students in creativity, collaboration, critical thinking, communication and self-reliance to be responsible and share their responsibilities among peers locally or globally.

There weren't any creative activities or projects only in a few schools like STEM or top talents student in public or experimental or private schools who are distinguished in some skills such as reading, doing poetry, playing music, drawing or creating a good project in Science.

Recently, teachers used Smart board to display their lessons in secondary schools, while students may or not use their tablets during explaining the lessons. The massive task is to explain lessons on smart board to prepare students for the final exam. It was a written paper exam three years before. The manual correction was a hard task, where teachers suffered from each time during Exams. Now, the responsibility of correction became less as become electronically via online, using educational tablets. These Tablets are a solution for the manual correction which lost validity in its results. Students in a must for these tablets to achieve their exams not for creativity, critical- thinking or collaboration, self- responsibility and communication.

A previous study was conduct by Ahmed Ali (2020) to investigate the progress of students in learning English language skills in primary stage. The study showed that the standard level of students was poor.

Lack of Skills in integrating technology in teaching and using AI-powered Tools and good Strategy in teaching as blended learning or flipped classroom or applying 21st Century Learning Design are the main obstacles facing the development of these school stages in Assuit city.

Students in primary and prep schools suffer from losing their right to collaborate, communicate, or using critical-thinking and solving real-world problems and being responsible for sharing their responsibility in applying AI- powered tools or 21st century learning skills. All students in these stages are studied hard to prepare them to the final written Exam. Teaching in this stage depends on memorization and students who managed to recite words, and the concepts of science and math lessons are considered distinguished from others.

The Revaluation of Artificial Intelligence (AI) in 2024, made lots of students use Chat GPT to investigate answering Exam's questions, using their tablets or smart phones; some of students tried to correct pronunciation and learned skills of language, collaboration, critical thinking, solving -problem, communication or knowledge construction and created projects to share applying 21st century designing skills.

This study sheds more lights on increasing the knowledge of Tools - supported with AI in motivating and engaging learners to be self- learners and creative. Moreover, learners will learn easily by learning Algorithms in their Learning in using AI – Modern Technology Tools (AMTT).

2. Review of Literature:

Artificial Intelligence (AI) has become a part of our daily life and its tools used in many fields ,attracting many learners and scholars including education .

Previous Studies :

AI designs intelligent machines, such as computer systems and computerized machines (robots) that function and respond similarly to the human brain (Karsenti, 2019). According to Mehrotra, (2019), AI is a field of computer science that investigates the analysis and creation of intelligent devices and software. Kaur and Gill (2019) state that AI is a digital innovation that replicates human intelligence through various machine computations. Kaur and Gill (2019) state

that AI is a digital innovation that replicates human intelligence through various machine computations. And it is a machine that was found by the brain of human being. The English learning environment has been transformed by artificial intelligence. An excellent learning environment for immersive English teaching is provided by AI. English learning becomes more comprehensive.

AI Tools have a great impact on language learning and teaching methods. Technology based on AI can make global classrooms accessible to all students and makes English learning more comprehensive. Through integration of apps; as changes voice to text and change text to voice , educational games were supported with AI. Also, AI provides a realistic simulated conversation platform for English language teaching and learning (Wang, 2019). So, educated educators and learners with Tools and apps supported with the power of AI , presented new technology and new strategy ,especially in teaching and practice activities inside classrooms. The inadequate pedagogical design of AI applications or the teachers' insufficient understanding of pedagogy may hinder the successful implementation of AI in the classroom (Zawacki-Richter et al., 2019). Using Computer resources effectively for group work and to support teaching and learning of language skills is a good study by Edward and Mercer , (1997), There was also a study was presented by Nunan (1991) , stated some of the features of writing , a study was present by Dobler (2007) suggest to be web literate, in Ch. 6 there was a clarifying of Academic Writing. An Introduction to Research Methodology and Paradigms 'was presented by Dr. Paul Ernest (1994), and to write an effective writing in an English research

Recent Studies:

A 'Research Project in TESOL/ TEFL' was presented by Dr. Abdullah,M.(2024), to understand the nature of reading online , a study was presented by Dr. Abdullah,M.(2024) showed the importance of Academic writing. A distinguished study was conducted by Dr. Abdullah, M. in (Sep, 2024,to Develop EFL Student Teachers' Self-Expression and Reflective Writing Skills , using Artificial Intelligence Chatbots Dr. Mahmoud showed the importance of using AI-powered Tools to develop self- regulation(2024). SRL is a cyclical process that involves three phases: forethought, performance, and self-reflection. , AI-assisted language learning tools to improve their language major and minor skills, such as grammar, vocabulary, reading comprehension, writing, and speaking .Another distinguished study was conducted by professor Dr. Hamdy -El Bedar ,showed a good translation to the meaning of AI in Arabic in one sentence "

إنه مزيج من العديد من التقنيات المختلفة التي تمكن الألات من الفهم والتصرف والتعلم بذكاء يشبه الإنسان" "ويرى بروفسور حمدي أن تطبيق الذكاء الإصطناعي سيتوجب توافر المعدات الرقمية وتدريب الموظفين الفنيين والمختصين"

Although the overall literature review is acquiring English language as [EFL], we concentrate on digital tools which supported with AI to reinforce learners 'motivation or engagements and achievements. Hwang et al. (2019) investigated recognition technologies, instructional strategies, and engaging activity layouts aimed at improving the motivation and speaking accuracy of English as a foreign language (EFL) student. They found that the way the activities were designed had a significant impact on the learners' speaking accuracy and motivation to learn. Cao et al. (2020) developed and constructed an intelligence-based system to enhance the use of contemporary information technology in college English culture teaching in four aspects such as personalization, virtualization, antilegalization and quality orientation of culture learning and teaching. Aljohani (2021) investigated the perceptions of EFL teachers and students regarding the use of AI to improve English language learning. Alharbi (2023) found that students frequently used a variety of AI-powered writing aid tools to enhance their writing. A study about AI and chat GPT to change the way we study language was presented by Solak, E. (2024).

Natural Language Generation (NLG) is a subfield of artificial intelligence and computational linguistics concerned with designing software to produce appropriate output in written or spoken form (Reiter & Dale, 2000). In recent years, NLG, coupled with Speech-processing technology and Speech synthesis, has garnered significant attention. Speech synthesis involves the concept of enabling computers to generate human-like speech, encompassing coding, decoding, and speech production. This has led to the emergence of related technologies in(2024)such as Open Ai ,Chat GPT , Araby AI, Gemini AI, Microsoft Copilot ,text-to-speech, Speech- to - Text , speech recognition systems, machine translation and advanced App are supported with the power of AI , as Microsoft Teams ,Microsoft designer , Reading Coach , Minecraft Education , Merge Cube (Virtual Reality) and Micro : Bit .

The Researcher managed to study lots of courses and modules on Microsoft Learn Educator Center (MLEC) in (2023: 2024), the latest Technology of using Apps and Tools were supported With AI and help to develop the educational Process and the language skills. Using Generative AI-Tools (GAT) can give educators the gift of time to enhance Curriculum Development (CD), individualized instruction and to develop critical thinking skills (CTS) and

competencies that are available in a wide range of professionals. AI- Tools can enhance engagement by providing immersive and hands-on learning experiences. These tools bring abstract concepts to life by encouraging active participation and promoting deeper understanding. Furthermore, Ai-Powered Educational Games (APEG) and quizzes can make learning more fun and interactive and increase learners' enthusiasm and participation. Microsoft has recognized six principles that guide AI development and use as (Fairness, Reliability and safety, Privacy and Security, Inclusiveness , Transparency and Accountability). To increase learners' knowledge about AI- machine ;the researcher studied (Fundamentals of Azure AI Services Course), (Develop Solutions with Azure AI Document Intelligence Course), (Fundamental of Machine Learning) to get knowledge about Open- AI (Chat GPT-4); the researcher studied a Module about (Developing Generative AI Solutions with Azure Open AI Service),(Fundamental AI Concepts) to get knowledge about Bing Search , edge Search , Copilot , Reading Coach , Microsoft Designer, Microsoft Teams , 3D virtual Reality and Education Minecraft or coding ; the researcher has taken these modules about (AI for Educators), (Empower Educators to explore the Potential of Artificial Intelligence), (Embark on your AI Journey with free AI Tools from Microsoft Education); to get knowledge about strategy of teaching with21st century Skills; the researcher has got self- study Module on(Innovative Learning with 21stCLD Real -World Problem Solving and Innovation Dimension), self- Study Module about(Build Reading Fluency with Reading Coach). AI can also assist educators with data driven and decision making and enhance instruction and connection within the digital learning environment.

AI opportunities in education can accelerate learning, inclusive design, improve efficiency, prepare learners for the future and fun of learning through learning the following AI-Supported Tools:

Through taking Several online courses, including Assessments on AI-Powered Tools and App on Microsoft Learn Educator Center[2] (MLEC). The Researcher shed more light on the purpose of using each tools and apps to inspire all learners in engaging and motivating their way in learning, Listening, speaking, reading , writing and practicing better pronunciation. A big challenge between

[2] AI for educators - Training | Microsoft Learn

Open AI and Google Gemini AI 2.0 or Araby AI. The Researcher Used Chat GPT - 4 Sider to illustrate some of these challenges.

Generative AI is a term for AI systems that generate various forms of novel output, including text, code, graphics, or audio. Generative AI uses deep learning techniques to recognize patterns in data and generate content based on these patterns.

OpenAI: is an artificial intelligence research organization known for developing advanced AI models, including the GPT series. It generated remarkably human – like text which focuses on natural language processing and understanding. **Gemini AI**, on the other hand, is developed by Google DeepMind to generate both textual and visual content and is designed to create advanced AI systems for various applications, combining capabilities in reasoning and processing large datasets. **Araby AI** is focused on providing AI solutions specifically designed for the Arabic language, aiming to improve accessibility and user experience for Arabic speakers. It helps learners also to generate content, Chat GPT , video ,audio or programming.

Microsoft Teams: supports Speech – to- Text, Conversation (STTC), Meeting and Live Broadcasting. These features make it easier for people who are deaf or hard of hearing to participate in online communication.

Microsoft Outlook, Microsoft Bing, Edge and Power Point, including Read aloud feature that uses Text – to – Speech technology (TTST) to read documents, emails or webpages aloud. This feature makes it easier for people with dyslexia.

Microsoft Translator: is a translation service that supports speech-to-speech, text-to-speech, and optical character recognition (OCR) to promote communication across different languages and formats in Teams or Outlook.

Microsoft Office 365: Many educators and students already use Power Point Designer to create slides for presentations in seconds. Analyzing Data, using Excel, checking writing with Microsoft editor for spelling, grammar and pronunciation. Prepare Presentation with Speaker Coach which provide Rehearsal feedback.

Large Language Model (LLM): Large language model (LLM) refers to AI models like **GPT- 4** by **OpenAI** that are trained on massive amounts of text and can generate human-like responses. Also, Microsoft uses large language model technology to increase the abilities of **Copilot**. Copilot is like having a research

assistant, personal planner, and creative partner at your side whenever you search the web.

Generative AI applications: Learners can use image generation Tools to create Visual storytelling, illustrations, storyboards, or comics that complement their written narratives. Educators can use Concept Visualization to generate visual representations of historical events, scientific phenomena, or mathematical concepts.

Microsoft Designer: is a graphic design app that helps create professional quality designs and original images just by typing in a prompt. It's easy to use and allows educators to create personalized, engaging visuals for all sorts of lessons or topics.

Microsoft insights: provides educators with at-a-glance views to help track their learners' academic progress and includes multiple AI-powered capabilities for educators.

Reading Coach[3]: a free tool that uses artificial intelligence and built-in fluency detection to personalize reading content and practice for learners. They can use this innovative blend of AI and expert-guided best practices to create magical and interesting stories. Learners can also choose to read a passage from a library or from their own content to read and get coached on challenging words. Reading Coach is powered by Immersive Reader, a fully accessible digital reading experience that makes reading comfortable for readers of all abilities. It provides personalized, independent reading fluency practice. It's one of the Microsoft Education Learning Accelerators and available for use in class or at home.

Fundamental AI Concepts[4]: Learners get Knowledge about Machine learning models trying to capture the relationship between data. Microsoft Azure provides the **Azure Machine Learning** service - a cloud-based platform for creating, managing, and publishing machine learning models. **Azure Machine Learning Studio** offers multiple authoring experiences such as: **Automated machine learning**: this feature enables non-experts to quickly create an effective machine learning model from data.

[3] Build reading fluency with Reading Coach - Training | Microsoft Learn

[4] Machine Learning in Microsoft Azure

Microsoft Make Code: Learners get Knowledge about Computer Science (CS) as a study of computers and the processes and principles used to make them do useful things. CS is an important facet of strengthening education models and preparing students for the future. Microsoft Make Code brings computer science to life for all students with fun projects. Although coding is an element of computer science, computer science isn't just about coding. It's also about developing computational thinking skills, critical thinking and a problem-solving process to help students think about how they work with code, data, and computers. It includes Minecraft Education[5] and Micro: Bit[6] and Circuit. It uses either blocks, Java script or Python programming language from age 6: 18.

Minecraft Education Edition: is a classroom-friendly version of the popular game Minecraft designed to promote learning through interactive experiences in subjects like math, science, history, and coding. It includes AI foundations programme that provides accessible, engaging materials for building AI literacy and features tailored for educators, such as classroom management tools, lesson plans, and resources aligned with educational standards.

Micro: Bit: is a small, programmable computer intended to teach programming and electronics. It features various sensors and connectivity options, allowing students to create projects and learn coding concepts hands-on. Micro: Bit also supports integration with platforms like Minecraft: Education Edition, where users can code Micro: Bit to interact with their Minecraft worlds, enhancing creativity and learning. Micro: bit offers tools called create AI, which allows users to explore AI movement and machine learning.

Both platforms are excellent for introducing AI concepts and providing hands-on learning experiences

Merge Cube[7]: AI generates 3D models from text prompts, for example, by describing an object in natural language, AI algorithms can create a detailed 3D model, without needing specialized software or technical expertise. It includes Augmented Reality (AR), Virtual Reality (VR) and Mixed Reality (MR). Students hold 3D objects, using augmented Reality technology, enabling an engaging way to interact with digital world. Students can explore a galaxy in

[5] https://education.minecraft.net/
[6] Microsoft MakeCode for micro:bit

[7] https://mergeedu.com/cube

the palm of their hands (hear, touch, see) ancient artifacts, investigate the core of the Earth. Students learn science and STEM effectively with AI – 3D objects.

Research Questions:

1. What are teachers and students' perceptions on integrating technology in teaching?
2. What are learners' perceptions on using AI Tools inside classrooms?
3. What expectation of using AI on motivating and enhancing self-learning towards learning EFL?

3 . Research Methodology & Design: The Theoretical framework of the Study

3.1 Design:

This study employed Mixed Method Research (MMR), to entail collecting, assessing and combining quantitative and qualitative research techniques within a unified study. Concerning the current study, (MMR) is expected to quantitatively investigate the level of Technology Knowledge (TK) for both educators and students and qualitatively capture the proficiency of enhancing AI-powered Tools on motivating and inspiring learners towards teaching and learning (EFL).

3.2 Participants:

This study included varied of participants first, Gamal Farghaly Secondary school students (210 students: grade 1, 200 students: grad 2 , 10 students : grad 3) second, specific groups of students from different schools as (AL-Rasmia Experimental distinguished Secondary School, STEM school, Al Sheed Experimental primary School, and Al Tahrir ,Al Nahda , Sameh Al Saed preparatory schools). Third, 20 teachers from different schools in Assiut city.

3.3 Instruments:

The research instrument used in this study employed multiple data collection methods to gather data comprehensively. This study used survey, questionnaire and observation as a research instrument . The questionnaire was used to measure the standard level of using technology and the type of devices inside classrooms. And to show the validity and stability of using technology and AI-powered tools inside classrooms for learners. As action research via Observation Instrument was used to notice the real experience of practicing AI-powered tools to inspire the standard level of learning

language skills and build creativity, self – responsibility, critical thinking and collaboration.

3.4 Data Collection:

This study is based on various types of data collecting. the first method was a survey via Microsoft form and Google form, which captured a quantitative data on teacher' s technological knowledge and the standard level uses of AI tools . And face to face questionnaire was conducted on all the students at Gamal Farghaly Secondary School : grade 1 , grade 2 and grade 3 to capture data on the type of devices such as laptop , mobiles or desktop computers on using technology to acquire language skills, and the standard level of using AI in enhancing their pronunciation, listening, reading, speaking and writing . and the second method was action research through observation during some activities on their tablets to measure their progress on using AI tools. This method assists the research to guarantee the validity and accuracy of the data. The researcher created a video through Observation, The link of the practical experience and Research action:

https://www.youtube.com/watch?v=8H2D01DnD_E

3.5 Data analysis:

Data gathered via Microsoft form, google form, the questionnaire and the observation using Microsoft Excel and IBM SPSS Statistics 26 to obtain the main and standard deviation scores. Asking Copilot to show differences of the features between IBM SPSS and Microsoft Excel. It answered, saying;" IBM SPSS Features: Offers a wide range of statistical tests, data manipulation tools, and advanced analytics capabilities. It's particularly strong in handling complex research designs and large datasets. But for Microsoft Excel Features: like pivot tables, formulas, and VBA (Visual Basic for Applications) for automation. It's highly flexible for managing and analyzing data".

4. Results and Discussions:

The initial goal of this study is to investigate teachers and students 'perception on using AI-supported tools on motivating self-learning towards English language learning in Assiut City, in Egypt. In this section, the researcher collected the results from questionnaire, survey and observation to be discussed and answer the questions of the research, which were:

1. What are teachers and students' perceptions on integrating technology in teaching?
2. What are learners' perceptions on using AI Tools inside classrooms?
3. What expectation of using AI on motivating and enhancing self-learning towards learning EFL?

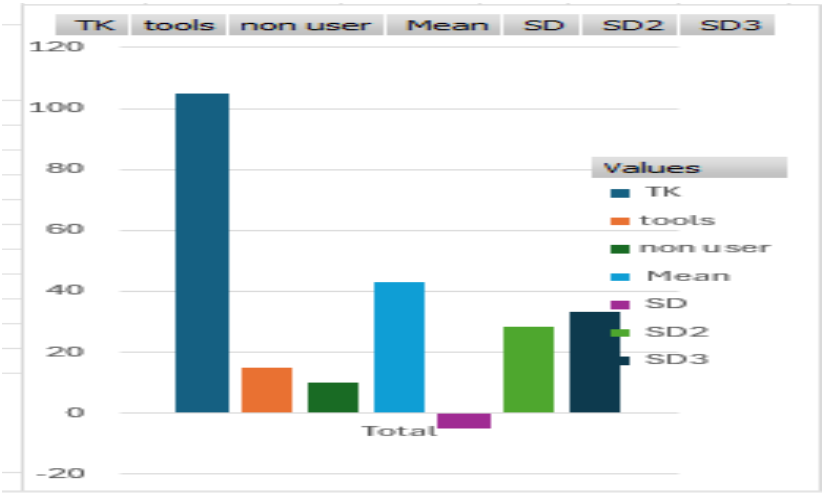
The results were analyzed according to IBMSPSS 26 and Microsoft Excel to give accurateness and validity in results.

First: to answer question one, through showing the perception of teachers and students in using technology in learning.

Table :1 Technology knowledge

Teachers

TK	tools	non user	Mean	SD	SD2	SD3
105	15	10	43.2	-5	28.2	33.2



This table investigated teachers' knowledge at Gamal Farghaly secondary school in using technology and simple tools such as documents and presentations used inside classrooms, The percentage of using technology was high. The value was 105, while their knowledge of technology tools was low. The mean or the average was about 43.2, while the standard deviation for each value was -5 for (TK), 28.2 for (tools) and 33.2 for(nu).

Table 2 Devices

Students: a face-to-face questionnaire was conducted inside classes of Gamal Farghaly Secondary School for boys. Figure 1 showed the high value of students of using technology through devices such as smart phones. Figure 2 showed the cumulative and the valid percentage of using technology. IBM SPSS Statistics 26 showed these analyses; The top value of class 3/2 was valid percentage 4.9, while the cumulative percentage was 73.2. The next class was 2/5, the valid percentage was 4.9, while the cumulative percentage was 68.3. The least value of using technology was class1/1; the valid percentage was 4.9, while the cumulative percentage was 29.3 , while percent was 4.9 and the frequency was 2 for each class.

Figure 1

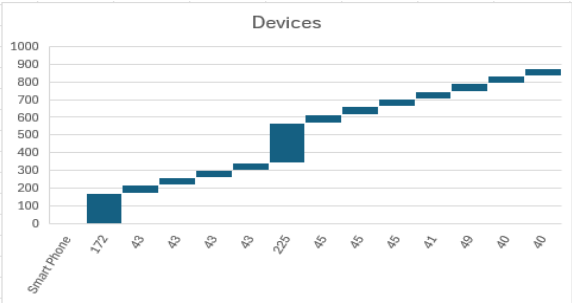


Figure 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		10	24.4	24.4	24.4
	1/1	2	4.9	4.9	29.3
	1/2	2	4.9	4.9	34.1
	1/3	2	4.9	4.9	39.0
	1/4	2	4.9	4.9	43.9
	2/1	2	4.9	4.9	48.8
	2/2	2	4.9	4.9	53.7
	2/3	2	4.9	4.9	58.5
	2/4	2	4.9	4.9	63.4
	2/5	2	4.9	4.9	68.3
	3/2	2	4.9	4.9	73.2

Table : 3 The standard level of using Devices among Students

Smart Phone	Tablet	Labtop	P.Computer
40	40	8	6
40	40	8	6
41	41	4	5
43	43	1	9
43	43	6	7
43	43	4	10
43	43	2	9
45	45	5	2
45	45	3	6
45	45	3	6
49	49	3	6
172	172	13	35
225	225	18	25

Figure 3

Smart Phone	Tablet	Labtop	P.Computer
874	874	78	132

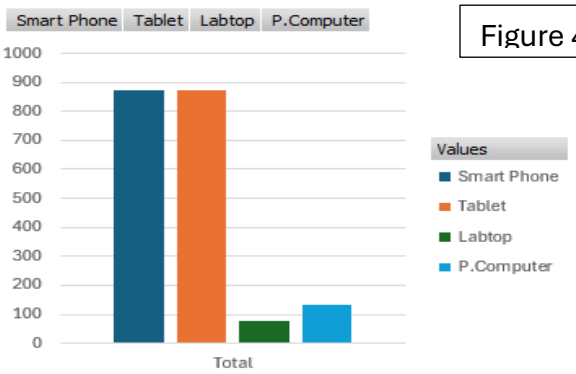


Figure 4

Figure 5

According to the numbers of students inside school classes who shared in the questionnaire face to face were 225 out of 397, Table 3, figure 3 showed the numbers of each class who showed their inspiration in using Smart phones, Tablets , laptops or personal computers in their learning English language.

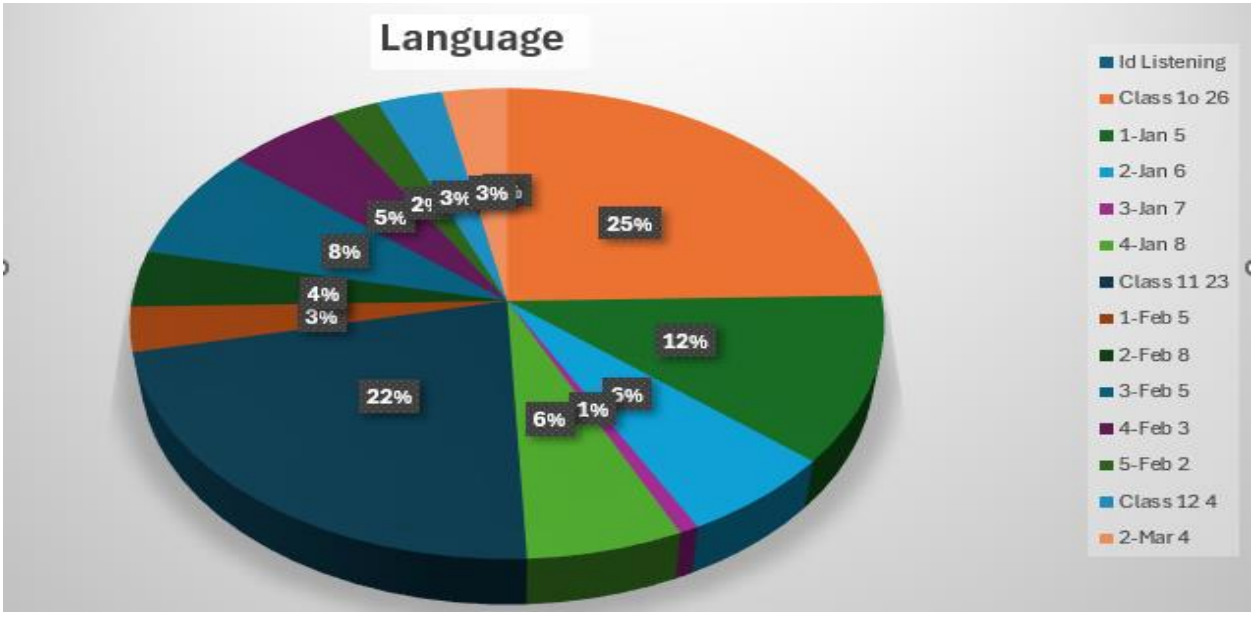
By analyzing the data through using Pivot Chart Analyze. The result was analyzed in figure 4 and figure 5. The percentage of users of Smart among students was higher was about 874 for using technology either for learning or personal use, while they used tablet only for academic exams for Mid and Final Term, the percentage was about 874. The percentage of using laptops was less than other devices, was about 78 as they are much more expensive, then the percentage of using personal computer was 132. Figure five showed us the value of using each device through columns to show the validity of each value. Blue column for Smart phones, Orange Column for Tablets, green Column for laptops and light blue column for Personal computers.

The researcher shared the analyses of results for answering the second question, which was What are Learners' perceptions on using AI – supported Tools inside classrooms? To answer these questions, we set the following quantitative data within three months to measure the perceptions on using AI- supported Tools in learning language Skills:

Table 4 : AI-powered Tools in Learning language Skills

		Language	Skills		Standard Deviation				
Id	Listening	speaking	Reading	Writing	Mean	S D L	S D S	S D R	S D W
Class 1o	26	32	12	11	72.75	2.7	40.75	60.75	61.75
1-Jan	5	15	2	2	6	1	9	4	4
2-Jan	6	8	4	3	5.25	0	2.75	1.25	2.25
3-Jan	7	1	2	3	3.25	-3.25	-2.25	1.25	0.25
4-Jan	8	8	4	3	5.75	-2.25	-2.25	1.75	2.75
Class 11	23	29	21	21	78.25	55.25	49.25	57.25	57.25
1-Feb	5	4	4	4	4.25	-0.25	0.25	0.25	0.25
2-Feb	8	5	5	1	4.75	-3.75	-3.25	-0.25	3 .25
3-Feb	5	10	4	9	7	2	-3	3	-2
4-Feb	3	7	3	3	4	1	-3	1	1
5-Feb	2	3	5	4	3.5	1.5	0.5	-1.5	-0.5
Class 12	4	4	4	3	3.75	-0.25	-0.25	-0.25	0.75
2-Mar	4	4	4	4	4	0	0	0	0

The Researcher collected the data quantitatively and analyzed it, using IBM SPSS Statistics 26 to show the Mean and Deviation within the three Months for class 10, class 11 and class 12. The percentage was varied among the three classes as shown in table 4. For **Class 10** got 26 points on using AI-Tools as chat GPT in listening , while the Mean was 72.75 and the deviation was 2.7 ; for Speaking , class 10 got 32 points , while the Mean was 72.75 and the deviation was 40.75; for Reading Class 10 got 12 points, while the Mean was 72.75 and the deviation was 60.75; for Writing ,Class 10 got 11 points, while the Mean was 72.75 and the deviation was 61.75. **Class 11** got 23 points on using AI- Tools as Chat GPT in Listening , while the Mean was 78.25 and the deviation was 55.25; for Speaking got 29 points , while the Mean was 78.25 and the deviation was 49.25 ; for Reading , it got 21 points , while the Mean was 78.25 and the deviation was 57.25. For Writing, it got 21 points, while the Mean was 78.25 and the deviation was 57.25. For **Class 12** got 4 points on using AI- Tools as ChatGPT in Listening , while the Mean was 3.73 and the deviation was -0.25 ; for Speaking ,it got 4 points , while the Mean was 3.75 and the deviation was -0.25; for Reading , it got 4 points , while the Mean was 3.75 and the deviation was -0.25, and for Writing, it got 3 points , while the Mean was 3.75 and the deviation was 0.25. Coloured Pie Chart showed better analysis with percentage, also for using AI-supported Tools as ChatGPT in developing language skills inside Gamal Farghaly Secondary school classes as below



The Chart design showed that **Class 10** got 25% with orange coloured , **Class 11** got 22% dark blue coloured and **Class 12** got 6% light blue coloured and it is the least result for their great interests in final Papel sheet exam.

To answer the third question; What expectations of using AI-powered Tool on Motivating and enhancing Self-Learning towards learning English Language? To answer this questions the researcher collected qualitative data through observing students in action research on practicing AI_ Powered Tools as (Chat GPT, Copilot, Reading Coach, Minecraft education, Merge Cube (Augmented Reality) and Micro: Bit) in different stages , either primary , prep or secondary schools in Assiut city schools since 2019 till now . For each App , the Researcher divided the class into two groups : controlled group learned English with the traditional way , while the experienced group learned a new Tool a time The Result appeared that The experienced group became more active , more fluency and be responsible of what they have learned , they managed to collaborate with peers and think critically to solve – real world problem as climate changing . They learned also how to be innovative and creative through achieving innovative activities where they acquired language skills through actions. They love learning language, felt fun and became very happy to learn something new and product new creative activities to develop self-learning and applying 21 st century learning design skills. The controlled group was still learned English in traditional way, without achieving any new products in comparison to the experienced group, they were late and inactive group.

Table: 6 Motivating Students in Learning with AI- Powered Tools

Statistics

		label	Minecraft	MicroBit	MergeCube	Mean	S.D	SD
N	Valid	5	5	5	5	5	5	5
	Missing	0	0	0	0	0	0	0

Frequency Table

label

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Grand Total	1	20.0	20.0	20.0
	Prep	1	20.0	20.0	40.0
	Primary	1	20.0	20.0	60.0
	Row Labels	1	20.0	20.0	80.0
	Secondary	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

According to IBM SPSS Statistics 26 , table 6 showed the times each stage practice the App as Minecraft , Micro: Bit and Merge Cube , it showed also the Mean = 5 and the deviation = 5 for each App, then it explained the valid percentage for each App = 20 , the Grand Total= 100.0 and the Cumulative percentage = 100.0 , for Prep stage= 40 , Primary stage= 60 and Secondary Stage= 80 .

According to Microsoft Excel we got the following data:

Stages	Minecraft	Micro: Bit	Virtual Merge Cube	Mean	S.D	Deviation	SD
Prep	90	80	80	190	100	110	110
Primary	20	20	20	20	0	0	0
Secondary	70	0	0	23	-47	23	23
Grand Total	**180**	**100**	**100**	**233**	**53**	**133**	**133**

When the researcher analyzed the data via Microsoft Excel, it showed that Prep stage Class got 90 points in practicing Minecraft Education, while the Mean was 190 and the deviation was 100 . Primary stage Class got 20 points, while the Mean was 20 and the deviation was 0. Secondary Stage Class got 70 points, while the Mean was 23 and the deviation was -47.

For practicing Micro: Bit; it showed that Prep Stage Class got 80 points, while the Mean 100 and the deviation was 110. For Primary Stage Class got 20 points, while the Mean was 20 and the deviation was 0. For Secondary Stage Class got 0, while the Mean was 23 and the deviation was -47

For Practicing Virtual Merge Cube ; Prep Stage Class got 80 points , while the Mean was 190 and the deviation was 110 , primary stage class got 20 points , while the Mean was 20 and deviation was 0 and Secondary stage class got 0 , while the Mean was 23 and the deviation was 23.The Grand total for Minecraft was 180 , for Micro : Bit was 100 and 100 for Virtual Merge Cube.

Figure 6:

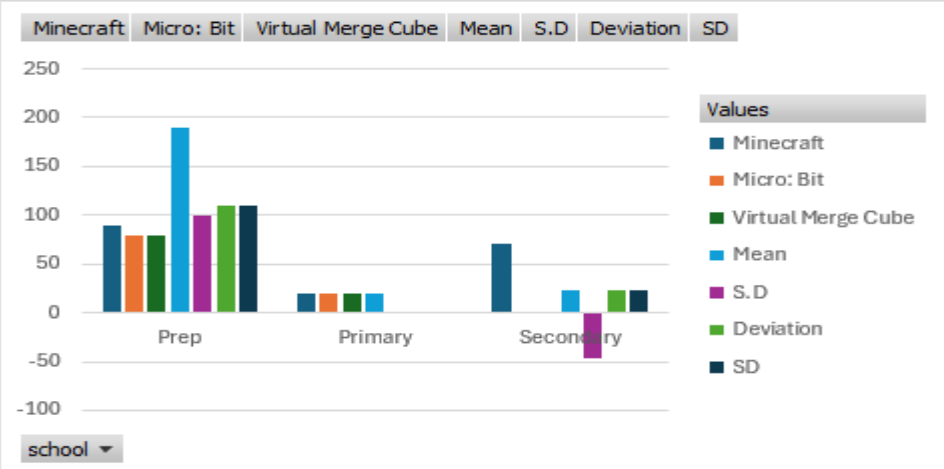


Figure : 6 showed the values of using Minecraft , Micro : Bit and Virtual Merge Cube in each class in prep, primary and secondary stage , the Mean and the deviation in Pivot Chart analyze .

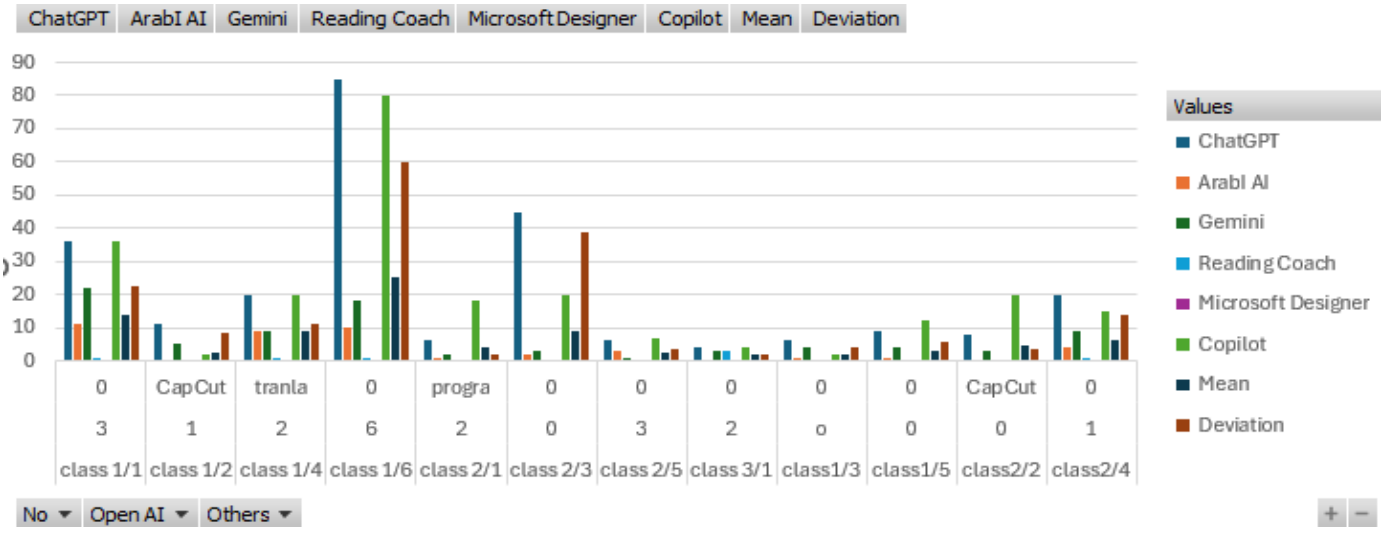
Table :7 Using AI-supported Tools for enhancing Pronunciation

No	ChatGPT	Open AI	Arabi AI	Gemini	Reading Coach	Microsoft Designer	Copilot	Others	Mean	Deviation
class 1/1	36	3	11	22	1	0	36	0	13.6	22.4
class 1/2	11	1	0	5	0	0	2	CapCut	2.7	8.3
class1/3	6	o	1	4	0	0	2	0	1.8	4.2
class 1/4	20	2	9	9	1	0	20	tranla	8.7	11.3
class1/5	9	0	1	4	0	0	12	0	3.2	5.8
class 1/6	85	6	10	18	1	0	80	0	25	60
class 2/1	6	2	1	2	0	0	18	progra	4.1	1.9
class2/2	8	0	0	3	0	0	20	CapCut	4.4	3.6
class 2/3	45	0	2	3	0	0	20	0	8.7	38.75
class2/4	20	1	4	9	1	0	15	0	6.25	13.75
class 2/5	6	3	3	1	0	0	7	0	2.5	3.5
class 3/1	4	2	0	3	3	0	4	0	2	2

Through gathering qualitative data via Observation in Research Action ; **Class 10** ,including (1/1,1/2,1/3,1/4,1/5 and 1/6) got the highest scale of marks on using Chat GPT and varied percentages ion using Other AI-powered Tools as Open AI , Arab AI , Gemini, Reading Coach, Microsoft Designer , Copilot and other apps in programming , translation or Montage Some of Students used Tool as Cap Cut but they didn't use Microsoft designer . Using Chat GPT and other AI-powered Tools as Copilot Gemini and Arabi AI managed students to develop the skill of Self-Learning to enhance better pronunciation and learn language through collaboration and created creative activities. The Mean was 13.6, while the deviation was 22.4. **Class 11**, including (2/1,2/2, 2/3,2/4 and 2/5) knew about Chat GPT and Copilot, and less knowledge in practicing other AI-powered tools like Gemini, Arabi AI, Open AI , Reading Coach or Microsoft Designer. They used

these Apps to improve their pronunciation and enhancing their motivation in learning English language skills, especially in listening and speaking. The Mean for class 2/3 was 87, while the deviation was 38.75. **Class 12.** including 3/1 was the least stage which shared on using AI-powered Tool either for improving pronunciation or practicing the language; the class got only 4 marks, the mean was 2 and the Deviation was 2, this due to preparing themselves to the Papel Sheet or final Exam. Finally, the Researcher discovered that students in this stage used Chat GPT to check for answers to difficult questions to be ready for Mid or final exam. They didn't learn to gain knowledge to improve different skills in life to be creative for future leaders. A few of the students knew about Reading Coach. Reading Coach is the best to develop self-learning, measuring students' progress till fluency to improve their pronunciation and be better in reading. Students didn't know about Microsoft Teams or Microsoft designer but knew little about Cap Cut to edit image and create video or create better Montage for their films.

Figure7:



The Results: were clear in figure 7. The scale of motivating and inspiring self – learning was varied among students in each class of the secondary stage at Gamal Farghaly Sultan Secondary School. It was Shown that the top Tool, students used was ChatGPT, then Copilot, Gemini, Open AI and Arabi AI. A few students know about Reading Coach and Cap Cut, but they didn't know about Microsoft Teams or Microsoft designers. Students used their Smart phones and

tablets to improve their skills in learning English language. Students used School Tablets for Academic Exams either Mid -Year or Final Exam, while they used Smart phones for collaboration, communication and using ChatGPT for improving language skills and for better pronunciation, but mostly, for getting answers to their difficult Exam Questions.

In the other hand, engaging students in activities to create creative projects, using AI-supported Tools as Minecraft, Micro: Bit, Virtual Merge Cube, Microsoft Designer, Bing Seach, Reading Coach, Chat GPT, Arabi AI, Gemini and Copilot, increased the motivation, self-learning and inspiration towards learning English language. Students acquired language through collaboration, communication and became creators in solving - problem, using critical thinking, collaboration and became self-reliant and responsible of what they have learned, and this engaged them to be future leaders through applying 21stcentury learning skills.

5.Conclusion:

The researcher revealed the goal of this study through answering the questions of this research. Based on findings and discussions; the results showed a good standard level of using technology through using some devices and apps to integrate technology in teaching among learners. The Results were shown also the moderate level of using AI-powered tool on enhancing students' learning skills and pronunciations, in other hand, engaging students in activities and practicing the language through collaboration, communication and using critical thinking in creating projects based on AI-powered Tools showed a better understanding of acquiring language and preparing leaders for the future. Moreover, using IBM SPSS 26 and Microsoft Excel show guarantee and validity results in analyzing data via survey (google form and Microsoft form), Questionnaire face to face inside classes and research action via Observation.

Students felt fun and happiness in learning in using such games and tools were supported with AI. This created a simple, easy and exciting AI- powered tool for future learning in Assiut city.

Recommendation:

The Initial goal of this study was to show the Perceptions of both teachers and students on using AI-supported Tools on motivating Self-learning towards English Learning in Assiut city in Egypt, so the Researcher recommended some points to

be achieve to create creative generation depend on Self- learning ,collaboration ,critical thinking and the best user of AI-powered tool to make changes locally and globally for future leaders:

- "Integrating Technology in teaching" should be a school subject taught at age 8to learn about the purpose of teaching with technology, what types of devices and programmes.
- "AI- Supported Tools" should be a school subject at the age of 8 to help students improve their English language Skills and pronunciation.
- "Computer Science" should be also a school subject at the age of 8 to know the language of programming as Java and Python and the main language of Composing Artificial Intelligence (AI).
- Moral as tolerance, respect, safety and believing In Allah (GOD) should be a MUST among Students.
- All learners should be learned AI-supported Tools are Means, not an End toward Learning path.

Acknowledgement:

'Fundamentals of Azure AI Services Course' and 'Microsoft Learn Educator Center' demanded Ministry account to join the platforms for studying varied courses and Modules.

Link to The Research Video:

https://www.youtube.com/watch?v=8H2D01DnD_E

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- Educator Center

Educator Center Overview - Microsoft Learn Educator Center | Microsoft Learn

- AI for eductors

AI for educators - Training | Microsoft Learn

- 21st century learning design

21st century learning design - Training | Microsoft Learn

- Office 365

- Get started with Office 365 and Windows for leadership - Training | Microsoft Learn

- Copilot

Search Microsoft Copilot: Your everyday AI companion

- Bing AI

Microsoft Copilot in Bing

- Open AI

https://openai.com/

- Microsoft designer with AI

Microsoft Designer - Stunning designs in a flash

- Minecraft Education Edition

https://education.minecraft.net/

- Micro: Bit make code

Microsoft MakeCode for micro:bit (microbit.org)

-Merge Cube

Merge Cube | AR/VR Learning & Creation (mergeedu.com)

- Reading Coach

Reading Coach Preview (microsoft.com)

https://coach.microsoft.com/en-US

Appendix:

-Begin Python coding in Minecraft with Make Code and Azure Notebooks

Begin Python coding in Minecraft with Make Code and Azure Notebooks - Training | Microsoft Learn

- Edge Search
- Arabic ai

Arabic ai - موقع لكل أدوات الذكاء الاصطناعي بالعربي (araby.ai)

- Google ai

Making AI helpful for everyone - Google AI – Google AI

- Gemini (google.com)