Exploring the Role of English in Enhancing the Performance of Egyptian Archaeologists: A Mixed Method Study

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Abstract

Incompetent English hinders meaningful communication between people in general and archaeologists in particular, which is harmful. It, in addition, obstructs the dissemination of knowledge, constrains scientific research, and deepens cultural divide thereby unsettling and limiting understanding, which is troublesome since disputes frequently arise from such circumstances. On the side of archaeologists, cooperation with foreign missions is required to enhance performance in terms of restoration and conservation techniques. In order to do that, communication, documentation and cultural understanding are essential in this process. Thus, the principal aim of the study was to explore the role of learning and using general and specialized English (English for Archaeology) in enhancing the performance of archaeologists. In this pursuit, the study employed a mixed method approach, quantitative and qualitative, in an attempt to confirm the results of the study. The triangulation consisted of an observation, based on which, a 40-item questionnaire was constructed, and a semi-structured interview was formulated and conducted. Following the combination and the comparison of the obtained data from the three instruments, the results revealed that 1) English plays an imperative role in improving and supporting the performance of Egyptian archaeologists, 2) in an archaeological setting, English is used for communication, documentation, presentation and publication of findings, museums displaying techniques and to improve attitude and tolerance along with motivating archaeologists to enhance their knowledge, 3) aged, experienced and archaeologists who participated in scientific research are the most to be aware of the essential role of English in terms of their perceptions.

Keywords: Archaeologists Professional Development, English for Archaeology, The English Language and Professional Development, Archaeologists and Communication

1 Introduction

Communication is currently forming the heart and spirit of human life. It is mostly concerned with speaking, listening, reading, and writing (Debata, 2013). In reference to this, English has proven to be indispensable in today's world due to its important role in connecting the world. English has become the second foreign language in almost all nations around the world, providing opportunities in various fields of education and work. In this sense, the necessity for the acquisition of languages occurs in order to achieve adaptability, productivity, benefit, and the capability of learning and communication such as sharing feelings and ideas with others as a worldwide communication process influencing human society's activities as a whole (Ahmad, 2016).

On the importance of the English language Bakhodirovna (2022) indicated that it is estimated to be utilized by 400 million native speakers, 300 million English as a second language speakers and a 100 million English as a foreign language speakers. Furthermore, 67 countries use English as their official language whereas 27 countries have it as their secondary official language. English for Specific Purposes (ESP), in turn, is an approach to teaching and learning English that is based on learners' needs (Rao, 2019). Adults who are already familiar with English, learn ESP frequently to transmit a particular set of professional skills and carry out certain activities relevant to their chosen profession (Hutchinson & Waters, 1987; Rahman, 2015).

Archaeology is a social science that investigates historical events in order to connect them to the present (Marshall, 2002). Archaeology and archaeological heritage are inextricably connected with tourism. To this end, archaeologists play an important role in enhancing tourism by excavating and displaying the material and artefacts of ancient civilizations (Pacifico & Vogel, 2012). It also goes without saying that Egypt is a tourist country due to its gorgeous landscapes and the remains of civilizations and earlier nations, including the pyramids, the various temples, the dome of Abu Al-Hawa, the Abu Simbel temple and the discovered archaeological artefacts (Aruna & Shalini, 2020). Therefore, in attempting to provide the highest quality of service to

tourists, a common language of communication between the receiving country and the guests is required, and because English is the global language of communication between countries, employees in tourism seek to develop language skills so as to communicate with foreigners from various countries (Bobanovic & Grzinic, 2011).

Mastering the English language is, in addition, required for archaeologists so as to succeed professionally. Hence, Best Accredited Colleges (2021) stated that archaeologists need either to have or learn a number of relevant skills. To analyze and comprehend data, they need to possess strong analytical abilities as well as knowledge of scientific concepts. The ability to think critically enables an archaeologist to develop conclusions from evidence gathered during fieldwork through observations and experiments. Writing research papers and presenting their results to other archaeologists, businesses, governmental organizations, and the general public require strong communication skills from archaeologists. In this sense, English incompetency is detrimental as it impedes meaningful communication amongst people in general and archaeologists particularly. Yet, it prevents knowledge accumulation, scientific research and widens the gap between cultures thereby disturbing and restraining understanding which is problematic as conflicts emerge in such situations. This problematic situation requires researching the perceptions of Egyptian archaeologists regarding the issue and mapping the uses of the English language where it is most beneficial to them.

In terms of the previously conducted studies, Al-Tarawneh and Osam (2019) was a qualitative study that intended to evaluate the potential discrepancy between the training provided at the university level and the competencies (tasks) needed in the Jordanian tourist industry. Suprayogi and Eko (2020) explored the use of virtual exhibition simulation as project-based learning in the English for Tourism course taken by students majoring in English Literature at university level. Amirbakzadeh and Vakil Alroaia (2020) analyzed the impact of learning English on tourism development in Iran. Alfriandi and Fatimah (2021) investigated developing English materials for English for Tourism and finding out the possible English developed materials for English for Tourism. Furthermore, to the authors' knowledge, none of the previously mentioned studies investigated the role of the English language in enhancing the performance of Egyptian archaeologists. Therefore, the principal aim of the study is to examine the role of learning and

using general and specialized English (English for Archaeology) and the way English enhances Egyptian archaeologists' performance in terms of communication, documentation, presentation of information and publication of research findings, their attitude and the display of artefacts in museums. The study attempts to answer the following questions:

Research Question 1: According to Egyptian archaeologists, to what extent does the English language enhance their performance?

Research Question 2: What are the uses of the English language in archaeology according to the study's findings?

Research Question 3: Who, in terms of demographics, is most cognizant of the contribution English makes to the performance of Egyptian archaeologists?

2 Methodology

The methodology part presents the study's research design, stages and procedures, the criteria and the type of research participants, the method(s) of data collection and data analysis.

2.1 Research Design

The foundation philosophy of the research study is pragmatism. This is due to the combination of the positivist and interpretivist frameworks. The study employed a mixed method approach quantitative and qualitative as the authors used three data collection methods: a non-participant structured observation, a questionnaire and a semi-structured interview. The observation process was conducted at one of the prominent museums in the city of Aswan that is located in the south of Egypt. The questionnaire was disseminated to Egyptian archaeologists so as to extract their perceptions concerning the role of the English language in improving their performance and the interviews were conducted by one of the researchers with experienced archaeologists so as to verify the questionnaire and the observation findings.

2.2 Research Stages and Procedures

The study was divided into three stages. In each stage, there were procedures implemented and steps followed by the authors of the study. Figure 1 briefly demonstrates the stages the authors went through so as to reach the conclusion of the study. The researcher went through three stages in order to reach the final conclusion of the study. The steps of the research included the following:

Figure 1

Stages of the Study

1) Literature was reviewed with respect to archaeologists' professional development to finally reach the gap of the English language and its essential role in improving the learning process of Egyptian archaeologists.

2) The researchers decided that literature review is not enough to decide the gap of the research and there has to be another way to confirm finding the gap and start researching feasible solutions for it.

3) A non-participant observation was the appropriate method to confirm the gap and notice Egyptian archaeologists' performance when lacking the language and when being competent users of it.

4) Luckily, there was a Spanish expedition working in Aswan at the time (October 2021). However, approval for the observation process is needed prior to initiating the process.

5) The museum's administration granted the researchers the approval for the observation and the starting point was on October 17ᵗʰ, 2021. The observation lasted for almost a month and 10 days.

6) Based on the findings of the observation, the researchers constructed a categorizing table for the uses of the English language for archaeologists. Also, they constructed a questionnaire which was administered to Egyptian archaeologists later on. The questionnaire was checked and piloted to ensure its appropriacy to achieve the study's aim and confirm the results of the observation.

7) The questionnaire was uploaded on a Google form and the link was sent to Egyptian archaeologists to finally reach 63 participants. The form was left open to accept responses for a week.

8) The questionnaire frequencies were downloaded on an excel sheet and were sent to a qualified statistician for its analysis. The Statistical Package of Social Sciences (SPSS) program was used in the analysis process.

9) To confirm the results of the observation and the questionnaire, interview questions were formulated (semi-structured). It was conducted in a comfortable room with expert archaeologists individually to ensure no other variables intervene in changing their responses such as peer pressure.

10) Following conducting the interview, responses were transcribed and coded. Then, extracts were taken to confirm the results of the observation and the questionnaire in the end.

11) Finally, the results were discussed in order to answer the study's questions.

2.3 Place of the Study

The non-participant structured observation was conducted in one of the prominent museums in the city of Aswan. The museum was selected to be the place of the study because it is often visited by foreign missions and expeditions such as the Spanish one that was selected for the study. The location of the place is not very far from several archaeological sites where archaeologists, Egyptians and foreigners, can easily move into these sites without exerting considerable effort. Also, the museum displays artefacts from several historical eras which requires

using various vocabulary items to describe the objects obtained by the museum. The museum has regular day shifts with full archaeological staff originally from Egypt working in different positions and holding various responsibilities.

2.4 Sample of the Study

The questionnaire sample of the study was randomly selected to disclose the perceptions of the Egyptian archaeologists from both sexes, in different age groups and with different levels of experience concerning the relationship between the English language and the way it enhances their performance at work.

Table 1

Distribution of the Studied Archaeologists According to Demographic Information (n = 62)

Demographic Items	No.	%
Gender		
Male	15	24.2 %
Female	47	75.8 %
Age		
Between 20 and 35	46	74.2 %
Between 36 and 50	11	17.7 %
Above 50	5	8.1 %
Years of Experience		
1 to 5	38	61.3 %
6 to 10	3	4.8 %
11 to 15	10	16.1 %
16 to 20	4	6.5 %
More than 20	7	11.3 %
Carried out or participated in scientific research?		
Yes	47	75.8 %
No	15	24.2 %

Demonstrated in table 1 are the demographic information obtained from the questionnaire frequencies. Participants were randomly selected to take part in the questionnaire. 63 participants responded to the questionnaire items; one participant was removed due to his/her contradictory answers. Out of the remaining 62 participants, 15 were male archaeologists representing 24.2% whereas 47 participants representing 75.8% were female archaeologists. With reference to participants' age, 46 participants constituting 74.2% were between 20 and 35 years old, 11 participants constituting 17.7% were between 36 and 50 years old and 5 participants constituting 8.1% were above 50 years old. In terms of experience in the field of archaeology, it was calculated in years. 38 participants (61.3%) had from 1 to 5 years of experience, 3 participants (4.8%) had from 6 to 10 years of experience, 10 participants (16.1%) had from 11 to 15 years of experience, 4 participants (6.5%) had from 16 to 20 years of experience and 7 participants (11.3%) had more than 20 years of experience. Also, 47 participants comprising 75.8% carried out or participated in scientific research whereas 15 (24.2%) stated the opposite.

Regarding the interview participants, nine expert archaeologists with over 16 years of experience were randomly selected and recruited. The selection criteria included holding an Egyptian passport or an Egyptian governmental card of identity, having extensive experience in the field of archaeology, having participated in scientific research, having participated in foreign expeditions works and being open to tell his/her opinion honestly without any kind of mental or verbal manipulation for results accuracy. As for the structured observation participants, there were six Egyptian archaeologists and other eight archaeologists in the Spanish expedition. The Egyptian archaeologists held bachelor's degrees in archaeology. Due to the scarcity of archaeological expeditions and missions in Egypt in the last 10 years, the observation sample was a convenience one which is one of the study's limitations. Another limitation was the friendly relationship between the museum's director and one of the researchers. However, it was compensated by making the observation process easier than expected by the director. Another compensatory feature is the utilization of two other data collection tools, the questionnaire and the interview, to confirm and ensure the accuracy of the collected data.

2.5 Data Collection

A non-participant structured observation was conducted by one of the researchers who is an archaeologist and a teaching assistant at the faculty of archaeology at Aswan university. Prior to the observation, approval was granted from the museum's director. The observation started on October 17th, 2021, and ended on November 25th, 2021. The expedition's work was divided into two sessions during the day, the first started from 9:00 in the morning till 12:00 in the noon. The second session lasted from 12:30 in the afternoon till 17:00 in the evening. There was a 30-minute break between both sessions. The researcher attended all the morning sessions and only three evening sessions. An observation schedule was preplanned by the researcher (see Appendix A). During the observation, the researcher took notes of the behaviours of the Spanish expedition members and the participating Egyptian archaeologists in terms of using the English language for different purposes. The data collected from the observation was sorted out and analyzed so as to discover whether there is a correlation between the competency of English and the performance of Egyptian archaeologists. The findings were tabulated and demonstrated in figure 2.

On the grounds of the observation findings and analysis, a questionnaire was constructed, and disseminated to Egyptian archaeologists with different levels of experience (see Appendix B). The questionnaire was estimated to take 5 to 7 minutes. It consisted of 40 items based on a 5-point Likert scale that ranges from strongly agree to strongly disagree. The 40 items were included in seven sections: A) Demographic Information (4 items), B) Communication & Collaboration (5 items), C) Documentation (7 items), D) Findings, Presentation and Publication (12 items), E) Museum Displays (4 items), F) Attitude and Motivation (4 items) and G) Direct Questions (4 items). Prior to its dissemination to Egyptian archaeologists, the questionnaire was piloted, translated to prevent any misunderstandings regarding the statements, and modified accordingly. Participants could easily select their responses using their smartphones or laptops because the questionnaire was delivered through a link to a Google form. Furthermore, language and arrangement, sentence complexity, absence of ambiguity in the phrasing, overall appearance (face validity), instructions' clarity, and length were all taken into consideration while evaluating the questionnaire.

The semi-structured interview consisted of three questions (see Appendix C). The first was about whether English is helpful or not for archaeologists in enhancing their performance. The respondent is given three choices (Yes, Maybe, No). The second question is concerned with the way English improves archaeologists' performance and the mapping of English uses for archaeologists. The respondents were given choices in terms of the ways English is used in archaeology and are asked to explain their answers for clarification. As for the last question, participants are asked whether they need to add any additional information or not. The interview was conducted in a comfortable room with expert archaeologists. It was conducted in the Arabic language for the avoidance of any misinterpretation and for archaeologists to express their perceptions independently and comfortably.

2.6 Data Analysis

The observation notes were all collected on one sheet. A table was drawn in order to determine and put the key words by which the researchers mapped all the noticed shortcomings of Egyptian archaeologists in terms of the English language. Data were then classified according to a few suggested keywords: communication, documentation, findings presentation and publication, museum displays and attitude and motivation. It is worth mentioning that these keywords were recommended based on the structured observation as they were extracted from the notes taken by the observer. Following that, the researchers finalized the table by classifying the shortcomings into the determined categories (keywords).

The collected data of the questionnaire were fed to the computer and analyzed using IBM SPSS software package version 20.0. (IBM Corp, 2011). The Kolmogorov-Smirnov test was used to verify the normality of distribution. Quantitative data were described using range (minimum and maximum), mean, standard deviation. Significance of the obtained results was judged at the $p \leq 0.05$ level. In detail, the SPSS was used to perform the following statistical treatments:

- Participants responses in percentages towards the items included in the questionnaire.
- Arithmetic mean ranks to identify the range.
- Pearson Correlation (r) to ensure the validity of the questionnaire items (see Table 1).
- Cronbach's alpha coefficient (α) to measure the reliability of the study's questionnaire.

- Student *t*-test to measure the normally distributed quantitative variables.

Table 2

Validity of the Questionnaire Items

Item No.	r	p	Item No.	r	p	Item No.	r	p
1	0.508*	<0.001*	13	0.525*	<0.001*	25	0.323*	0.010*
2	0.593*	<0.001*	14	0.626*	<0.001*	26	0.335*	0.008*
3	0.611*	<0.001*	15	0.703*	<0.001*	27	0.683*	<0.001*
4	0.614*	<0.001*	16	0.755*	<0.001*	28	0.180*	0.163
5	0.368*	0.003*	17	0.740*	<0.001*	29	0.740*	<0.001*
6	0.469*	<0.001*	18	0.682*	<0.001*	30	0.661*	<0.001*
7	0.711*	<0.001*	19	0.655*	<0.001*	31	0.774*	<0.001*
8	0.769*	<0.001*	20	0.731*	<0.001*	32	0.646*	<0.001*
9	0.664*	<0.001*	21	0.752*	<0.001*	33	0.566*	<0.001*
10	0.729*	<0.001*	22	0.276*	0.030*	34	0.466*	<0.001*
11	0.741*	<0.001*	23	0.596*	<0.001*	35	0.676*	<0.001*
12	0.380*	0.002*	24	0.445*	<0.001*	36	0.482*	<0.001*

Note. "r" Pearson coefficient, "*" Statistically significant at p ≤ 0.05

As demonstrated in table 2, the validity test (r)revealed that all items are statistically significant at the level (p ≤ 0.05). As for the reliability test, the Cronbach's alpha coefficient (α) for the 36 items was (α = 94). Both tests' results show that the questionnaire was valid and highly reliable.

The interview responses were analyzed thematically in an inductive way by suggesting two themes: the direct uses of English and the indirect impact of using English, under which there were five codes: communication, documentation, findings' presentation and publication, museum displays and attitude and motivation. Then, the researchers extracted a few phrases that would explain the results and match those of the questionnaire and the observation. Additionally, the archaeologists' names were replaced with some abbreviations that reveal their gender and their interview order. A male archaeologist number 1 is referred to as "ArchM 1)" whereas a female archaeologist number 2 is referred to as "ArchF 2". "Arch" stands for archaeologist, "M" stands for male, "F" stands for female and the number refers to their order in the interview. The responses

were explained thoroughly in order to discover whether there is a correlation between the English language competency and Egyptian archaeologists' performance.

3 Findings

The findings section demonstrates the results and the data collected following conducting the observation process, the questionnaire dissemination and the interview with few experienced archaeologists. The observation findings are presented first due to their foundational role in building the questionnaire and the interview questions. Then, the frequencies of the questionnaire and finally the interview extracts and interpretation as they are compared to the questionnaire results.

3.1 Observation Results

The non-participant structured observation was conducted by one of the researchers who works as a teaching assistant at the faculty of archaeology in Aswan university. It was conducted during the Spanish expedition's visit to one of the prominent museums in the city of Aswan. The observation lasted for a month and 10 days in order to excavate and come up with new discoveries related to the Egyptian and Nubian civilizations. During the observation period, the researcher observed the behaviour of the expedition's members so as to learn from them excavation and preservation techniques as they were members at an internationally recognized university in Spain who attained high academic degrees and positions that are concerned with Egyptology and archaeology in general. The findings of the observation have been summarized in figure 2.

بنك المعرفة المصري

Figure 2

Detailed Categorization of the Uses of English for Archaeologists

Communication & Collaboration	Documentation	Presentation & Publication	Museum Displays	Attitude & Motivation
• Daily-life conversation • Discussion • Giving & receiving instructions	• Restoration & conservation laws • Notes to archaeologists • Recorded notes to archaeologists • Reading notes • Listening to recorded notes • Watching documentary videos • Technical terminologies	• Oral presentation of Excavation Findings • PowerPoint Presentation Writing • Implement & Write research • Enhance knowledge • Conferences • Seminars and Webinars • Discuss research projects & articles • Publications	• Labels, Leaflets & Brochures • Museums guides Explanations & Descriptions	• Encourage communication and collaboration • Enthuse cultural sensitivity • Enhance knowledge • Encourage familiarity with conservation and restoration laws

The museum administration consisted of a director who had a master's degree in archaeology, administrative staff and conservators who had bachelor's degrees in archaeology, and a librarian. The expedition consisted of eight members whereas the Egyptian archaeologists' team was only six members. There was an agreement between the expedition members and the museum administration to hold a temporary display exhibition for the discovered artefacts that would last for two years at the museum. All the Spanish expedition artefacts at the museum were extracted from famous archaeological sites in Aswan.

The communication between the expeditions' members and the museum's archaeologists was in English. Unfortunately, due to the limited number of people who could communicate in English at the museum, only two Egyptian archaeologists dealt with the expedition before informing the others with their plans. In addition, during the preparation of the temporary display exhibition, the expedition paid a visit to one of the explored archaeological sites to the members of the museum. The expedition's director first explained the archaeological area, then led a tour of the site, identifying and discussing the locations of the antiquities discovered and the historical eras to which they belong. Then, he described the inscriptions on the walls of the site's ancient

tombs. Due to a high number of administrators' inability to communicate in English, the secretary for Administrative Affairs for Antiquities interpreted the manager's explanation to the rest of the team.

Additionally, the museum's director of the restoration department and her assistants were assisting the members of the expedition in restoring some of the damaged objects by permitting them to use the museum's restoration laboratories and providing the necessary tools for the restoration process. However, the communication was difficult because of the Spanish restorer's inability to speak English fluently and accurately.

On the first day of the temporary display, there was a large number of attendees from many nationalities, including Spanish, German, Arabian, and others. At the time, the ceremony displayed several activities, including a presentation about the expedition's mission, a speech to thank the invited guests, an explanation of the extracted and displayed artefacts by the expedition's director and only people who could speak English started to get link and made fruitful conversations with the other attendees. This was a distressing experience for those (archaeologists) who could not engage in scientific or archaeological conversations and discussions with regard to the temporary display discoveries at the museum.

Because there was considerable and notable cooperation between the Spanish mission's members and the Egyptian archaeologists who assisted them during the exploration, excavation, and extraction of artefacts, they were invited to the temporary exhibition hall's opening ceremony. During their tour of the temporary exhibition hall, the invitees read the information about the antiquities from the labels of the artefacts and which ancestry they belonged to. In this respect, the two teams at the museum discussed the style of displaying the pieces in the vitrines, as well as the arrangement of objects from the oldest age to the recent age. The museum disseminated brochures explaining the work of the mission, the excavated antiquities, and the types of antiquities displayed, and wrote this in both English and Arabic. It is worth mentioning that the Spanish expedition donated a television that displays the mission's works in the archaeological area of Aswan, beginning with surveying, extracting, preserving and documenting artefacts, transferring them to the museum's store, and then displaying them in the temporary display exhibition which was all in English.

Notes, between the members of the museum and the members of the mission, were written in English so that each of the two parties could understand the different points of view with respect to work. In case of the absence of the mission director, he used to send instructions to one of the museum's restorers in voice messages via WhatsApp in English. Following finishing the temporary display exhibition of the museum, the expedition displayed a documentary video on the mission's work at the site, including their excavation and extraction of antiquities, which were later placed in the museum. It is worth mentioning that technical terminologies for antiquities were, in addition, used in writing reports, definitions, scientific papers, and laws related to the maintenance and restoration of antiquities.

3.2 Questionnaire Results

The questionnaire frequencies were calculated and organized in tables 3, 4, 5, 6 and 7. Table 8 demonstrates the relation between overall English language in enhancing the performance of archaeologists with demographic information.

Table 3

Distribution of the Studied Archaeologists According to Communication & Collaboration

Q	Communication & Collaboration	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Mean rank
		No.	%	No.	%	No.	%	No.	%	No.	%	
1	I use English to communicate with members of the excavation expeditions.	0	0.0	8	12.9	13	21.0	20	32.3	21	33.9	3.87
2	I use English to ask for or tell my opinion in various discussions about archaeological sites with archaeologists from a foreign background.	3	4.8	7	11.3	6	9.7	28	45.2	18	29.0	3.82
3	I use English when I listen to and give instructions about the archaeological sites to archaeologists from a foreign background.	3	4.8	6	9.7	12	19.4	21	33.9	20	32.3	3.79
4	Using English **helps** to communicate and collaborate properly with excavation expeditions members from different foreign backgrounds.	0	0.0	0	0.0	5	8.1	23	37.1	34	54.8	4.47
5	Using English **does not help** to communicate and collaborate properly with excavation expeditions members from different foreign backgrounds.	26	41.9	30	48.4	3	4.8	1	1.6	2	3.2	4.24

Table 3 presents the frequencies that are concerned with English and the skills of communication and collaboration. 41 participants comprising 66.2% either agreed or strongly agreed that they use English to communicate with members of excavation expeditions.

46 participants comprising 74.2% stated that they use English to ask for or tell their opinions in various discussions about archaeological sites with archaeologists from a foreign background. 41 participants constituting 66.2% confirmed that they use English when they listen to and give instructions about archaeological sites to archaeologists from a foreign background. 57 participants representing 91.9% approved that using English helps to communicate and collaborate properly with excavation expeditions members from different foreign backgrounds. 56 participants representing 90.3% disapproved that using English does not help to communicate and collaborate properly with excavation expeditions members from different foreign backgrounds.

Table 4

Distribution of the Studied Archaeologists According to Documentation

Q	Documentation	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Mean rank
		No.	%	No.	%	No.	%	No.	%	No.	%	
6	Restoration and conservation laws and agreements are all written in English by archaeological authorities in Egypt.	4	6.5	15	24.2	17	27.4	17	27.4	9	14.5	3.19
7	I use English to write notes about archaeological artefacts, antiquities or sites for me and for other archaeologists to read because English is the universal language of communication nowadays.	0	0.0	9	14.5	10	16.1	22	35.5	21	33.9	3.89
8	I use English when I read notes written by other archaeologists from a foreign background and published research papers.	0	0.0	9	14.5	4	6.5	24	38.7	25	40.3	4.05
9	I use English when I listen to recorded notes or watch videos on discovered archaeological sites because video presenters use English to describe and explain their discoveries.	1	1.6	7	11.3	10	16.1	24	38.7	20	32.3	3.89
10	I use English or technical terminologies in English when I record my notes about artefacts or archaeological sites to make it easy for excavators and archaeologists to know more about the artefact or the archaeological site.	0	0.0	11	17.7	11	17.7	20	32.3	20	32.3	3.79
11	Using English **helps** document and describe the archaeological discoveries in Egypt.	0	0.0	7	11.3	6	9.7	24	38.7	25	40.3	4.08
12	Using English **does not help** document and describe the archaeological discoveries in Egypt.	17	27.4	29	46.8	8	12.9	4	6.5	4	6.5	3.82

Table 4 presents the questionnaire frequencies concerning the documentation items. 26 participants (41.9%) agreed that restoration and conservation laws and agreements are all written

in English by archaeological authorities in Egypt whereas 17 participants (27.4%) were neutral and 19 (30.7%) disagreed with the item. 43 participants (69.4%) stated that they use English to write notes about archaeological artefacts, antiquities or sites for themselves and for other archaeologists to read because English is the universal language of communication nowadays. 49 participants comprising 79% acknowledged that they use English when they read notes written by other archaeologists from a foreign background and published research papers. 44 participants representing 71% confirmed that they use English when they listen to recorded notes or watch videos on discovered archaeological sites because video presenters use English to describe and explain their discoveries. 40 participants constituting 64.6% approved that they use English or technical terminologies in English when they record their notes about artefacts or archaeological sites to make it easy for excavators and archaeologists to know more about the artefact or the archaeological site. 49 participants (79%) affirmed that using English helps document and describe the archaeological discoveries in Egypt. To confirm the previous statement, 46 participants (74.2%) either disagreed or strongly disagreed that using English does not help document and describe the archaeological discoveries in Egypt.

Table 5

Distribution of the Studied Archaeologists According to Findings, Presentation and Publication

Q	Findings, Presentation and Publication	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Mean rank
		No.	%	No.	%	No.	%	No.	%	No.	%	
13	I use English to present the findings of discoveries orally to other archaeologists.	2	3.2	7	11.3	17	27.4	27	43.5	9	14.5	3.55
14	I use English to present the findings of discoveries in the written form on PowerPoint presentations to other archaeologists.	0	0.0	10	16.1	12	19.4	24	38.7	16	25.8	3.74
15	I use English to search for knowledge as most valuable research articles and books are written in English.	0	0.0	4	6.5	13	21.0	21	33.9	24	38.7	4.05
16	I use English to write or help to write research articles on new archaeological discoveries because it is the language of science today.	0	0.0	7	11.3	15	24.2	23	37.1	17	27.4	3.81
17	Most international conferences of archaeology use English as a medium of communication.	0	0.0	5	8.1	4	6.5	29	46.8	24	38.7	4.16
18	Most international archaeology seminars and webinars are conducted in English.	0	0.0	9	14.5	11	17.7	26	41.9	16	25.8	3.79
19	Most research articles in archaeology use the English language for publication.	0	0.0	6	9.7	11	17.7	27	43.5	18	29.0	3.92
20	I use English to discuss the findings of my or other research articles with other archaeologists.	0	0.0	11	17.7	14	22.6	20	32.3	17	27.4	3.69
21	Using English enhances the presentation and publication of research findings and articles.	0	0.0	8	12.9	9	14.5	25	40.3	20	32.3	3.92
22	Using English does not enhance the presentation and publication of research findings and articles.	13	21.0	32	51.6	6	9.7	6	9.7	5	8.1	3.68
23	Using English **enhances** scientific research in archaeology.	1	1.6	4	6.5	9	14.5	28	45.2	20	32.3	4.00
24	Using English **does not enhance** scientific research in archaeology.	15	24.2	32	51.6	8	12.9	2	3.2	5	8.1	3.81

Table 5 presents the frequencies of the findings, presentation, and publication section of the questionnaire. 36 participants (58%) approved that they use English to present the findings of discoveries orally to other archaeologists. 40 participants (64.5%) acknowledged that they use English to present the findings of discoveries in the written form on PowerPoint presentations to other archaeologists. 45 participants (72.6%) stated that they use English to search for knowledge as most valuable research articles and books are written in English. 40 participants (64.5%) approved that they use English to write or help to write research articles on new archaeological

discoveries because it is the language of science today. 53 participants (85.5%) agreed that most international conferences of archaeology use English as a medium of communication. 42 participants (67.7%) acknowledged that most international archaeology seminars and webinars are conducted in English. 45 participants (72.5%) affirmed that most research articles in archaeology use English for publication. 37 participants (59.7%) stated that they use English to discuss the findings of their research articles or other research articles with other archaeologists. 45 participants (72.6%) approved that using English enhances the presentation and publication of research findings and articles. In confirming statement number 21, the same number of participants disapproved that using English does not enhance the presentation and publication of research findings and articles. Also, 48 participants constituting 77.5% acknowledged that using English enhances scientific research in archaeology. In confirming statement number 23, 47 participants representing 75.8% either strongly disagreed or disagreed that using English does not enhance scientific research in archaeology.

Table 6

Distribution of the Studied Archaeologists According to Museum Displays

Q	Museum Displays	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Mean rank
		No.	%	No.	%	No.	%	No.	%	No.	%	
25	Museums use English only or English and another language on the signs, cards and brochures used to describe artefacts and antiquities in the written form.	0	0.0	14	22.6	9	14.5	23	37.1	16	25.8	3.66
26	Museum guides use English only or English and another language to describe antiquities and to explain the archaeological discoveries to the public.	2	3.2	10	16.1	10	16.1	26	41.9	14	22.6	3.65
27	Using English **makes it easy** for foreigners, scientists and archaeologists to gain knowledge about the artefacts and the objects presented in museums thereby conducting scientific research sometimes.	0	0.0	3	4.8	14	22.6	30	48.4	15	24.2	3.92
28	Using English **does not make it easy** for foreigners, scientists and archaeologists to gain knowledge about the artefacts and the objects presented in museums thereby conducting scientific research sometimes.	4	6.5	25	40.3	14	22.6	14	22.6	5	8.1	3.15

Table 6 presents the data collected concerning the relationship between the English language and museum displays. 39 participants (62.9%) stated that museums use English only or English and another language on the signs, cards and brochures used to describe artefacts and antiquities in

the written form. 40 participants (64.5%) acknowledged that museum guides use English only or English and another language to describe antiquities and to explain the archaeological discoveries to the public. 45 participants (72.6%) affirmed that using English makes it easy for foreigners, scientists and archaeologists to gain knowledge about the artefacts and the objects presented in museums thereby conducting scientific research sometimes. 29 participants (46.8%) agreed that using English does not make it easy for foreigners, scientists and archaeologists to gain knowledge about the artefacts and the objects presented in museums thereby conducting scientific research sometimes whereas 14 participants (22.6%) were neutral and 19 (30.7%) disagreed.

Table 7

Distribution of the Studied Archaeologists According to Attitude and Motivation

Q	Attitude and Motivation	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Mean rank
		No.	%	No.	%	No.	%	No.	%	No.	%	
29	Knowing English encourages me to communicate and collaborate with foreign expeditions and participate in their discoveries.	0	0.0	2	3.2	3	4.8	30	48.4	27	43.5	4.32
30	Knowing English enthuses me to be culturally open and know more about the archaeologists I am collaborating with in terms of their backgrounds thereby creating good relationships with them.	0	0.0	0	0.0	6	9.7	25	40.3	31	50.0	4.40
31	Knowing English motivates me to learn more about archaeology as most important books and research articles are written in English.	1	1.6	1	1.6	4	6.5	26	41.9	30	48.4	4.34
32	Knowing English makes me familiar with conservation and restoration laws thereby respecting archaeological sites.	1	1.6	4	6.5	6	9.7	27	43.5	24	38.7	4.11

Table 7 presents the perceptions of archaeologists regarding attitude and motivation. 57 participants (91.9%) stated that knowing English encourages them to communicate and collaborate with foreign expeditions and participate in their discoveries. 56 participants (90.3%) confirmed that knowing English enthuses them to be culturally open and know more about the archaeologists they are collaborating with in terms of their backgrounds thereby creating good relationships with them. 56 participants (90.3%) agreed that knowing English motivates them to learn more about

archaeology as most important books and research articles are written in English. 51 participants (82.2%) approved that knowing English makes them familiar with conservation and restoration laws thereby respecting archaeological sites.

Table 8

Relation Between Overall English Language in Enhancing the Performance of Archaeologists with Demographic Information

Demographic Items	n	Overall	Test of Sig	p
		Mean ± SD.		
Gender				
Male	15	4.03 ± 0.55	t= 0.624	0.535
Female	47	3.92 ± 0.56		
Age				
Between 20 and 35	46	3.84 ± 0.54		
Between 36 and 50	11	4.21 ± .40	F= 3.558*	0.035*
Above 50	5	4.34 ± 0.69		
Years of Experience in Archaeology				
1 to 5	38	3.79 ± 0.56		
6 to 10	3	4.09 ± 0.27		
11 to 15	10	4.16 ± 0.52	F= 2.790*	0.035*
16 to 20	4	4.0 ± 0.44		
More than 20	7	4.42 ± 0.37		
Carried out or participated in scientific research?				
Yes	47	4.05 ± 0.50	t= 2.809*	0.007*
No	15	3.61 ± 0.60		

Table 8 demonstrates the data collected regarding the relation between the English language in enhancing the performance of archaeologists with demographic information. There was no statistically significant difference between the male (n=15, M=4.03) and female (n=47, M=3.92) archaeologists' perception to the importance of language in enhancing their performance.

There was a statistically significant difference with regard to the age as those above the age of 50 (n=5, M=4.34) were more aware, in terms of their perception, about the importance of the English language than those who are between 20 and 35 years old (n=46, M=3.84) and those who are between 36 and 50 (n=11, M=4.21). In terms of experience, archaeologists with more than 20 years of experience (n=7, M=4.42) were more aware than all of the other categories. Also, there was a statistically significant difference in terms of perception for the interest of those who carried out or participated in scientific research before.

3.3 Interview Results

Some responses have been selected from the expert Egyptian archaeologists who participated in the semi-structured interview. The selected responses represent the opinions of the participants regarding the effect of English on their performance.

ArchF 1, who acts as the museum's deputy for archaeological affairs and had 30 years of experience, acknowledged the importance of English in terms of communication stating that without communication between the expeditions' members and the archaeological inspectors, nothing can be recognized or identified with regard to excavation discoveries. In addition, ArchM 2, who has more than 16 years of Experience in the field, stated that communication in English enhances cooperation for the sake of archaeological discoveries. This means that archaeologists should speak to one another while working together so that their work would eventually lead to fruitful results. If not communicating, work would be slow and result in failure to excavate and discover.

Extract 1

"Yes, because it is the language of communication between inspectors and missions, and also so that what is happening in excavations and archaeological explorations can be recognized." (ArchF 1)

Extract 2

" Yes, it helps in communication and cooperation in the field of antiquities with foreign missions, and acquiring the language helps in cooperation with missions working in the museum for a specific period." (ArchM 2)

In reference to documentation, all participants agreed that documentation must be in both languages, Arabic and English. This is because the English proficiency level of most Egyptian archaeologists is not good enough for English documentation (see Extract 3). On the other hand, English documentation is carried out for foreign missions' members. In this case, for Egyptian archaeologists, improving their English proficiency level would make a great contribution to the documentation process. The documentation techniques include writing notes, recording voice notes and using terminologies. If archaeologists are proficient in English. They can implement them easily. Conflict between the foreign team and the Egyptian archaeologists is eliminated in this case due to the high-level of understanding between both parties.

Extract 3

"Yes, because documentation must be in more than one language, considering that English is the official language in cooperation, dealing, and leading visitors to the museum site to make information accessible to everyone." (ArchF 3)

During the work with foreign expeditions, there is always a weekly or a monthly presentation that reveals archaeologists' work in the designated period (see Extract 4). This is stated by ArchM 4 who holds the position of the vice dean of one of the archaeology faculties in Egypt. Moreover, he confirmed using English when presenting in international conferences and seminars. This, in addition, helps tourism flourish and prosper (see Extract 5).

Extract 4

"At the end of the weekly or monthly work harvest, missions and museums make a presentation that shows their work during the week and the tasks that have been accomplished during this period, in addition to conferences and seminars that require an English presentation." (ArchM 4)

Extract 5

"It helps to support tourism." (ArchM 3)

In terms of museum display techniques, museum guides should obtain more than one language where English is essential. Since not all visitors are Egyptians, guides should present and explain about the antiquities in the museum in English to foreign visitors. Furthermore, the cards that present the antiquities must include at least two languages among which is English. In this case, visitors can enjoy reading about the displayed artefacts independently without waiting for the guides to present and explain about every single antiquity. This, as well, shows the compassion and the attention of the museums' administration for tourists from different nationalities (Extract 5).

Extract 6

"In temples, guidance panels and posts are placed to describe the temple in both Arabic and English with the addition of explanatory pictures." (ArchM 4)

In terms of motivation, archaeologists who are proficient in English can enhance their knowledge as they are able to read, write, understand and speak English fluently and accurately. They can look for knowledge in research articles, books and international webinars (see Extract 8). This happens because they feel motivated to learn and improve their skills through knowledge as nothing could have stopped them other than the language. For attitude, cultural understanding is improved through communication and knowing more about the background of expeditions' members. Every member's culture is important. Cultures sometimes determine the attitudes that lead people to behave accordingly. That is why respecting every member's culture is essential for productivity and fruitful outcomes of the work.

Extract 7

"It increases the knowledge of the archaeologist and his awareness and translates many archaeological discoveries and increases knowledge of information about archaeological pieces from all over the world." (ArchF 1)

Extract 8

"The museum library contains about 2000 books in English, while books written in Arabic do not exceed 200 to 300 books." (ArchM 1)

Finally, ArchM 4, shared that there has to be a balanced utilization of both languages as on the one hand, English is today's world language of communication and scientific research and on other hand, the Arabic language preserves the identity, represents the heritage of the Egyptian people and is the native language with which they express feelings and thoughts. In this sense, losing the native language means losing identity thereby losing heritage. Therefore, the balance is central. On the one hand, being open to the world and learning more while on the other hand keeping identity and heritage safe.

Extract 9

"In the end, the researcher must balance between Arabic and English, where Arabic is the mother tongue, heritage, identity, and English is currently the language of communication and scientific research" (ArchM 4)

Combining instruments results altogether, it is obvious that the interview responses substantiate the questionnaire frequencies and the structured observation on the role of the English language competency and the enhanced performance of Egyptian archaeologists. Further discussion of the results is due in the next part.

4 Discussion

There were three research questions. The discussion part answers the research questions based on the data collected by the observation, the questionnaire, and the interview.

4.1 Research Question 1: According to Egyptian archaeologists, to what extent does the English language correlate with their performance?

From the quantitative and qualitative results, it was deduced that Egyptian archaeologists are aware of the importance of English in enhancing their performance, especially when working with foreign expedition members. This has been proved statistically through items 33, 34, 35 and

36. In item 33, 95% of participants either strongly agreed or agreed that English is important for archaeologists whereas in item 34, 90.5% of participants either strongly disagreed or disagreed that learning English is not important for archaeologists. Moreover, in item 35, 93.6% of the questionnaire participants confirmed that English enhances the performance of archaeologists whereas in item 36, 92% of participants disapproved to the opposite statement. The interview results confirmed and extended those of the questionnaire as all the expert archaeologists who participated in the study showed awareness of the significant role played by the English language in order to ameliorate the performance of Egyptian archaeologists. This substantiates the positive correlation between learning and using general and specialized English and the productive performance of Egyptian archaeologists.

4.2 Research Question 2: What are the uses of the English language in archaeology according to the study's findings?

According to the observation findings, English is commonly used in communication, documentation, presentation and scientific publication, museum display techniques and attitude and motivation (see Figure 3). The observation findings have been corroborated by the questionnaire frequencies and the interview responses. Concerning communication, archaeologists use English to enhance collaboration through communicating with foreign expeditions' members. These forms of communication include daily-life simple conversations, discussions about work issues and discoveries, and giving instructions at work sites and when dealing with antiquities. Based on that, for an archaeologist, not being able to communicate will eventually lead to slower workflow and less productivity in terms of the discoveries. This is also interrelated to the attitude of both parties, the foreigners and the Egyptians, as communication in its simplest form causes cultural understanding, tolerance, mutual respect and strengthens the relationship with the sponsoring bodies of various expeditions. Generally speaking, communication would eventually conduce to enhance business and increase the numbers of expeditions and missions due to the improved reputation of the joint work on discoveries with Egyptian archaeologists.

Archaeologists usually document everything while working either through the written form of notes or records through voice notes and videotaping. Documenting in English increases the probability of getting assistance from foreign granting bodies such as universities to sponsor new

projects that refine and intensify discoveries in various archaeological sites. Additionally, reading the written notes and listening to the recorded ones require a high-level of English proficiency and the familiarity with technical terminologies of archaeology with respect to paintings, artefacts, architecture and various archaeological and historical objects.

Oral and PowerPoint presentations of discoveries require English to keep a professional image about the organization an archaeologist works for and because the audience is usually from different backgrounds, foreigners and Egyptians. Attending or presenting in international webinars and seminars, discussing research findings and publishing research necessitates learning and using English professionally. Museums use English in their brochures, leaflets and cards that provide information on different artefacts. Even museum guides use English as an official language with foreigners as they may have foreigners with different nationalities from Europe, Asia, Africa and the two Americas. Since English is today's world language, it is the language that should be used in museums along with any other languages.

Figure 3

Categorization of English Uses for Archaeologists
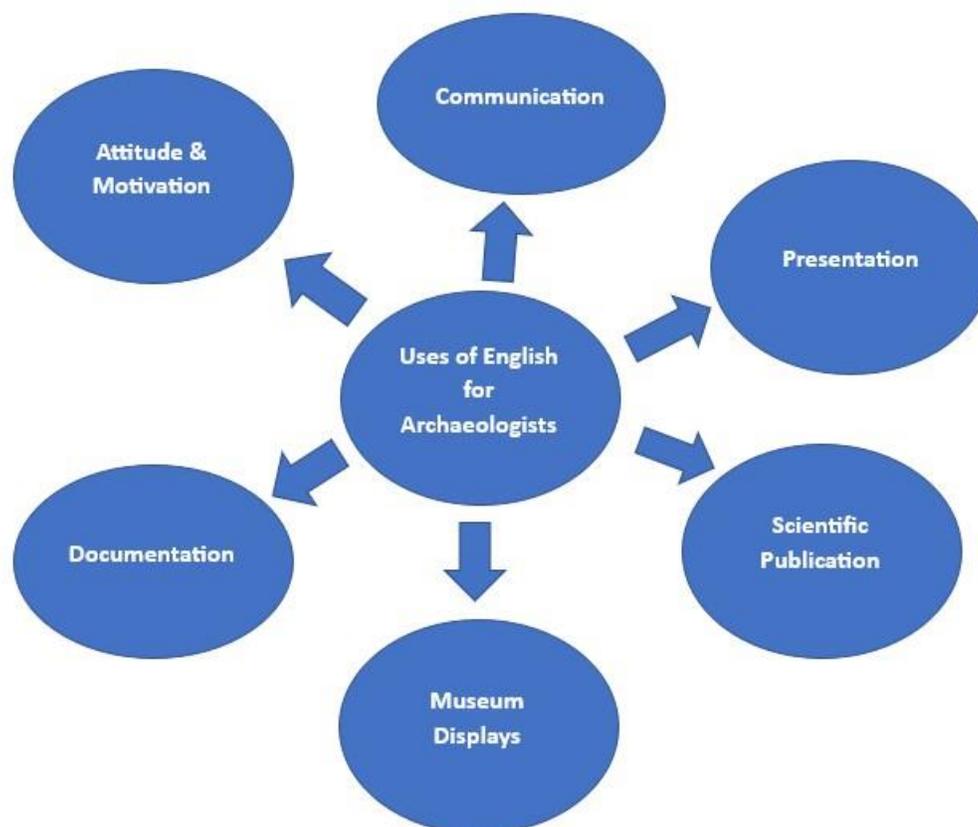
Being proficient in English is conducive to a professional attitude with foreigners generally and at work specifically. It simply leads to cultural tolerance, respect and work productivity. It also motivates archaeologists to learn more about restoration and conservation laws along with enhancing their knowledge through updating themselves with the latest effectives techniques in their work by reading research papers and books. Broadly speaking, it has several benefits on the personal and the professional levels. Subsequently, not being proficient in English has its dreadful drawbacks that range from the low productivity at work to the condescending, fluctuating attitude and the culturally insensitive behaviour from foreign and Egyptian archaeologists due to the lack of understanding.

4.3   Research Question 3: Who, in terms of demographics, is most cognizant of the contribution English makes to the performance of Egyptian archaeologists?

According to statistical data, aged archaeologists who are above 50 years old are more aware of the role of English in improving and boosting Egyptian archaeologists' performance than the younger categories. This is presumably a result of their extensive experience dealing with various foreign expeditions before. Those who were with more than 20 years of experience in the field and those who conducted or participated in scientific research were also aware of the role of English in their context. Based on that, age, experience and conducting or participating in scientific research are a few factors that affected the perceptions of Egyptian archaeologists regarding the importance of English and its enhancing role in their performance.

5 Conclusion

The study aimed at investigating the role of the English language in enhancing Egyptian archaeologists' performance with foreign expeditions through disclosing their perceptions and classifying the uses of English in an archaeological context. The study revealed that 1) English plays an imperative role in improving and supporting the performance of Egyptian archaeologists, 2) in an archaeological setting, English is used for communication, documentation, presentation and publication of findings, museums displaying techniques and to improve attitude and tolerance along with motivating archaeologists to enhance their knowledge, 3) aged, experienced and archaeologists who participated in scientific research are the most to be aware of the role of English in terms of their perceptions. According to the author's knowledge, the study approaches two domains: archaeology and English as a foreign language or English for specific purposes. Moreover, none of the previously mentioned studies has addressed the current research issue.

The study calls for the archaeological authorities' attention to find possible solutions to enhance and support Egyptian archaeologists' performance in terms of communication, documentation, presentation, publication, motivation and attitude and other aspects by providing professional development courses through elevating their English proficiency level. These courses could be implemented in the form of open-air classes in archaeological sites where archaeologists get to be trained on the commonly used language with tourists. In addition, English as a Foreign

Language (EFL) or English for Specific Purposes (ESP) instructors are requested to design or develop an English curriculum and deliver English classes that teach communicative English for Egyptian archaeologists. In this sense, scholars are encouraged to measure the effects of designed English syllabi that integrate Artificial Intelligence (AI) tools such as ChatGPT and archaeology terminologies on improving the performance of archaeologists. Yet, it is recommended that scholars invent tools that measure the performance of archaeologists in relation to communication, documentation and the presentation of discoveries and test their validity and reliability. They are also advised to suggest feasible methods of exhibition that incorporate the English language attractively manifesting its imperative role in the display process.

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Appendices

Appendix A

Observation Schedule

Time / Days	09:00 (Morning) to 12:00 (Noon)	Break 30 minutes	12:30 (Afternoon) to 17:00 (Evening)
Sunday (17/10/ 2021**)**	√		x
Monday	√		x
Tuesday	√	**Break**	√
Wednesday	√		x
Thursday	√		x
Weekly Holiday			
Sunday (24/10/2021**)**	√		x
Monday	√		x
Tuesday	√	**Break**	x
Wednesday	√		x
Thursday	√		√
Weekly Holiday			
Sunday (31/10/2021**)**	√		x
Monday	√		x
Tuesday	√	**Break**	x
Wednesday	√		x
Thursday	√		x
Weekly Holiday			
Sunday (7/11/2021**)**	√		x
Monday	√		x
Tuesday	√	**Break**	x
Wednesday	√		x

Thursday	√		x
Weekly Holiday			
Sunday (14/11/2021**)**	√		x
Monday	√		√
Tuesday	√	**Break**	x
Wednesday	√		x
Thursday	√		x
(November 25th , 2021) Presentation of Discoveries (√)			

Appendix B

The Study's Questionnaire

The purpose of this research study is to uncover the contribution of the English language in enhancing the archaeological performance of archaeologists in Egypt. In this pursuit, the study attempts to elicit the perceptions of archaeologists. The questionnaire consists of 40 items included in seven sections: A) Demographic Information, B) Communication & Collaboration, C) Documentation, D) Findings, Presentation and Publication, E) Museums, F) Attitude and Motivation and G) Direct Questions. The questionnaire is estimated to take 5 to 7 minutes. Your answers are very valuable for this research study. You have the right either to continue or discontinue the process at any time.

A) Demographic Information

- I am (male – female).
- My age is (between 20 and 35 – between 36 and 50 – above 50) years old.
- I have (1 to 5 – 6 to 10 – 11 to 15 – 16 to 20 – more than 20) years of experience in archaeology.
- I carried out or participated in scientific research (Yes – No).

B) Communication & Collaboration

1. I use English to communicate with members of excavation expeditions.
2. use English to ask for or tell my opinion in various discussions about archaeological sites with archaeologists from a foreign background.
3. I use English when I listen to and give instructions about the archaeological sites to archaeologists from a foreign background.
4. Using English **helps** to communicate and collaborate properly with excavation expeditions members from different foreign backgrounds.
5. Using English **does not help** to communicate and collaborate properly with excavation expeditions members from different foreign backgrounds.

C) Documentation

6. Restoration and conservation laws and agreements are all written in English by archaeological authorities in Egypt.
7. I use English to write notes about archaeological artefacts, antiquities or sites for me and for other archaeologists to read because English is the universal language of communication nowadays.
8. I use English when I read notes written by other archaeologists from a foreign background and published research papers.
9. I use English when I listen to recorded notes or watch videos on discovered archaeological sites because video presenters use English to describe and explain their discoveries.

10. I use English or technical terminologies in English when I record my notes about artefacts or archaeological sites to make it easy for excavators and archaeologists to know more about the artefact or the archaeological site.
11. Using English **helps** document and describe the archaeological discoveries in Egypt.
12. Using English **does not help** document and describe the archaeological discoveries in Egypt.

D) Findings, Presentation and Publication

13. I use English to present the findings of discoveries orally to other archaeologists.
14. I use English to present the findings of discoveries in the written form on PowerPoint presentations to other archaeologists.
15. I use English to search for knowledge as most valuable research articles and books are written in English.
16. I use English to write or help to write research articles on new archaeological discoveries because it is the language of science today.
17. Most international conferences of archaeology use English as a medium of communication.
18. Most international archaeology seminars and webinars are conducted in English.
19. Most research articles in archaeology use the English language for publication.
20. I use English to discuss the findings of my or other research articles with other archaeologists.
21. Using English enhances the presentation and publication of research findings and articles.
22. Using English does not enhance the presentation and publication of research findings and articles.
23. Using English **enhances** scientific research in archaeology.
24. Using English **does not enhance** scientific research in archaeology.

E) Museum Displays

25. Museums use English only or English and another language on the signs, cards and brochures used to describe artefacts and antiquities in the written form.
26. Museum guides use English only or English and another language to describe antiquities and to explain the archaeological discoveries to the public.
27. Using English **makes it easy** for foreigners, scientists and archaeologists to gain knowledge about the artefacts and the objects presented in museums thereby conducting scientific research sometimes.
28. Using English **does not make it easy** for foreigners, scientists and archaeologists to gain knowledge about the artefacts and the objects presented in museums thereby conducting scientific research sometimes.

F) Attitude and Motivation

29. Knowing English encourages me to communicate and collaborate with foreign expeditions and participate in their discoveries.

30. Knowing English enthuses me to be culturally open and know more about the archaeologists I am collaborating with in terms of their backgrounds thereby creating good relationships with them.

31. Knowing English motivates me to learn more about archaeology as most important books and research articles are written in English.

32. Knowing English makes me familiar with conservation and restoration laws thereby respecting archaeological sites.

G) Direct Questions

33. Learning English **is important** for Archaeologists.
34. Learning English **is not important** for Archaeologists.
35. Using English **enhances** the performance of an archaeologist.
36. Using English **does not enhance** the performance of an archaeologist.

Appendix C

The Study's Semi-Structured Interview

1- Does the English Language help enhance Egyptian archaeologists' performance?

(Yes – Maybe – No)

2- Does English assist to improve Egyptian archaeologists' performance in terms of the

following?

    a) **Communication and Collaboration** (Yes – Maybe – No) Please explain how?

    b) **Documentation** (Yes – Maybe – No) Please explain how?

    c) **Findings, Presentation and Publication** (Yes – Maybe – No) Please explain how?

    d) **Museum Displays** (Yes – Maybe – No) Please explain how?

    e) **Attitude and Motivation** (Yes – Maybe – No)   Please explain how?

3- Would you like to add anything else?

Interview Responses Analysis (Coding)

Participants	Responses	Codes	Themes	Root
ArchF 1	Yes, because it is the language of communication between inspectors and missions, and also so that what is happening in excavations and archaeological explorations can be recognized.	Communication	Direct Uses of English in Archaeology	The English Language and Archaeologists Performance
ArchF 2	Yes, for understanding, gaining experience, and ease of work with foreign missions.			
ArchF 3	Yes, it helps in communicating with missions during the search for archaeological pieces, considering that it is the global language, as well as accompanying foreign visitors.			
ArchF 4	Yes, ease of cooperation and communication with Spanish			
ArchF 5	Yes, a way to communicate with foreign missions.			
ArchM 1	Yes, the first to be interested in the field of antiquities were foreigners through working in the archaeological field and then writing about it. For example, Nubian antiquities, the first to be interested and talked about was the scientist Maroznier, where he addressed Nubian letters in his writings. Also, the museum library contains about 2000 books in English, while books written in Arabic do not exceed 200 to 300 books.			
ArchM 2	Yes, it helps in communication and cooperation in the field of antiquities with foreign missions, and acquiring the language helps in cooperation with missions working in the museum for a specific period. And also in dealing with foreign visitors inside the museum, in addition to writing scientific reports on exhibits in English.			
ArchM 3	Yes, dealing directly with tourists.			
ArchM 4	Yes, because most of the studies on archaeology are written in English, and it is also a means of communication and cooperation with foreign missions and dealing with research.			
ArchF 1	Yes, because there are some scholars and researchers from foreign countries who study archaeological pieces inside museums, so explanation cards or descriptions of antiquities are written in both Arabic and foreign languages, considering it the first language in the world currently.	Documentation		
ArchF 2	Yes, documentation in Arabic and then translation into English.			

ArchF 3	Yes, because documentation must be in more than one language, considering that English is the official language in cooperation, dealing, and leading visitors to the museum site to make information accessible to everyone.	
ArchF 4	No, in the case of foreigners, documentation is done in English, but in the case of Arab archaeologists, documentation is done in Arabic.	
ArchF 5	Yes, where in the case of documentation in foreign countries outside Egypt, it is in English, while documentation inside Egypt is in Arabic and then translated into English later.	
ArchM 1	Yes, because the main headings of the sheet for documenting antiquities extracted from any archaeological site by foreign missions are written in English, where the accurate description of the damage suffered by the artifact is in English.	
ArchM 2	Yes, since most archaeological discoveries are documented by foreign missions and these data are in English or any other language, this requires the archaeologist to acquire a language so that he can deal with these missions and discoveries and record them in museum records in Arabic based on their translation.	
ArchM 3	Yes, it helps to facilitate communication and openness.	
ArchM 4	Yes, in case of writing scientific letters from master's and doctoral degrees or promotion research, the researcher is exposed to a large number of foreign references, so the researcher must be able to master a foreign language. The researcher must also be familiar with foreign documentation methods and research methodologies.	
ArchF 1	Yes, because there are visitors from different parts of the world and the museum gives cultural lectures towards this group.	**Findings, Presentation and Publication**
ArchF 2	Yes, it helps in scientific publishing in both Arabic and English.	
ArchF 3	Yes, for ease of communication with foreign attendees during lectures in English at scientific conferences.	
ArchF 4	Yes, it depends on the listening group. In the case of foreigners, the presentation is in a foreign language, but in the case of Egyptians, it is in Arabic with the introduction of some foreign terms.	
ArchF 5	Yes, in the case of a foreign group, it is necessary to explain and describe the Temple of Isis in English. In addition, one of the visitors may ask about one of the landmarks of the temple, so it is necessary to answer in English to convey the information to him and to the rest of the visitors.	

ArchM 1	Yes, because the policy of international journals for scientific publishing must be written in English, and even in the case of local or international journals in Arabic, an Abstract must be written in English. Even at the beginning of dealing with computer programs for writing scientific research on a word program, it needs English, and also to make a Presentation it needs English.			
ArchM 2	Yes, since the archaeologist who has acquired a language makes it easier for him to translate exhibits written in a foreign language and display, explain, and publish scientifically.			
ArchM 4	Yes, at the end of the weekly or monthly work harvest, missions and museums make a presentation that shows their work during the week and the tasks that have been accomplished during this period, in addition to conferences and seminars that require an English presentation.			
ArchF 1	Yes, because Arabic is first followed by English, in addition to the fact that tourists visit the museum from different nationalities.			
ArchF 2	Yes, displaying cards in both Arabic and English for visitors.			
ArchF 3	Yes, explanatory cards were written in both Arabic and English.			
ArchF 4	Yes, in temples, guidance panels are placed to describe the temple in both Arabic and English with the addition of explanatory pictures.			
ArchF 5	Yes, if guides are not available, guidance panels inside the temple play this role of explanation and description in both Arabic and foreign languages.	Museums	Indirect Impact of	
ArchM 1	Yes, so that we can return to museum display methods in foreign museums and how to display it is necessary to know the language.			
ArchM 2	Yes, museum display requires two languages, a foreign language and Arabic.			
ArchM 3	Yes, by describing the history of each artifact in English by knowing information about Nubians.			
ArchM 4	Yes, It is necessary to master the English language inside museums to deal with visitors, missions, etc., as there is a branch in each country of the International Council of Museums (ICOM) that has employees who all work under this institution and speak English.			
ArchF 1	Yes, it increases the understanding of the archaeologist and his awareness and translates many archaeological discoveries and increases knowledge of information about archaeological pieces from all over the world.	Attitude and Motivation		
ArchF 2	Yes, giving confidence, more benefit, and helping to facilitate work.			
ArchF 5	Yes, ease of communication and understanding.			

ArchM 1	Yes, if the language is available, words will not be limited but benefit will expand to a large degree because knowledge is not limited to the field of antiquities but expands to other fields.			
ArchM 3	Yes, a way of dealing in terms of behavior, morals, speech, response, and smile with tourists and visitors.			
ArchM 4	Yes, It increases skill and dealing with people and increases the researcher's confidence where he can ask questions,			