



# International Journal of Multidisciplinary Research and Growth Evaluation.

## Translation and Research in Arabic at Jerash University: A Survey-based Analysis of Procedures

**Dr. Mohammad Amin Hawamdeh**

Faculty of Arts, Jerash University, Jordan

\* Corresponding Author: **Dr. Mohammad Amin Hawamdeh**

### Article Info

**ISSN (online):** 2582-7138

**Volume:** 06

**Issue:** 01

**January-February 2025**

**Received:** 16-11-2024

**Accepted:** 19-12-2024

**Page No:** 1029-1035

### Abstract

This study aims at investigating the overall relationship between translation and academic research (written in Arabic) on technical and cognitive levels. Methodically, a self-administered questionnaire was designed to consist of 18 statements distributed to the two aspects above. As a survey-based investigation to apply to a representative sample of the faculty members at Jerash University (JPU) in Jordan, the questionnaire was validated by seven professors in their capacities as deans, deputy deans or directors of specialized centers at JPU. Translation was found to help more fruitfully conduct research projects with the text(s) translated from other languages being unavoidable and bridge the gap between identity and loyalty as an Arab researcher might be shocked by the knowledge or experience encountered in foreign languages. Also, Arab researchers know that translation is an important window to see other peoples' intellectual and philosophical heritage and various achievements. Also, translation was found to contribute to national development with the translator as a partner of the same. Eventually, translated research is highly recommended in university contexts as it helps trigger dialogues and, hence, address the other thoughts of the world in one language both positively and productively.

**DOI:** <https://doi.org/10.54660.IJMRGE.2025.6.1.1029-1035>

**Keywords:** Jerash University, translation, academic research, Arabic-English, Jordan

### Introduction

Translation plays a significant role in developing academic research in the Arab World. Researchers depend on translations or translators in varying degrees. As many Arab researchers usually pursue their higher education abroad, most often in Europe or America, their research papers are usually written in the language they already know well, being the language of instruction in the countries they study in. Hence, they will, most of the time, write their research papers in a language they know well. Other researchers may know other languages to an extent that make them depend on themselves when they need to translate. The field of study of the researcher is also relevant in this regard. One main factor that plays a role in defining the extent to which a researcher depends on translations in developing his research is the reliability of the scientific translation in the academic circles. It seems that researchers do not usually appreciate the role a translator play in developing their research papers. So reference to translators or acts of translation is, most of the time, marginal or implied, if any. The role of translators in academic research is usually ignored by researchers. Some researchers resort to hide the translational act or he may opt for domesticating parts of his research (Temple & Young, 2004, p. 175; Pereira, 2009, p. 2) <sup>[17, 14]</sup>.

Translation aims in the first place at satisfying the academic research requirements which are necessary to the development of any nation. Sometimes, the researchers themselves play this role as they are working on their researches. However, urgent need for translation or a translator is likely to occur. It can be said that translation and academic research have a mutual relationship. In other words, as researchers, regardless of their fields of study, utilize translation to develop their researches, translation strategies develop simultaneously in order to abide by the linguistic and cultural rules and conventions of the target language as well. A researcher may not be much interested in the methods of translation he/she follows, as his/her priority is the piece of

information to be looking for in the source language; however, the linguistic and cultural requirements of the target language will soon become a priority as well. The SL terms, concepts and structures may influence the TL's linguistic and even cultural framework, and the TL itself develops through translation. Accordingly, this study attempts to answer the following two questions:

1. What translational procedures might the JPU's faculty members consider as most substantial for their research projects in Arabic?
2. To what extent can translation be a valuable constituent of the academic research in Arabic conducted at the JPU?

## 2. Related Literature

Claiming that the process of Arabicization is one of the pillars of scientific labor that may truly contribute to the growth of Arab society and the enrichment of human knowledge, Abdulmuttalib (1998)<sup>[1]</sup> supported translation as an activity that is at the core of scientific research. This procedure must therefore be carried out within the parameters of a project that is based on having a clear vision and being closely aligned with the requirements and realities of the country. In order to contribute to this sector, he suggested that translation be fundamentally connected to scientific research as well as any cultural activity with diverse interests and orientations. In this respect, Lahsasna (2004)<sup>[11]</sup> tackled the topic of translation and its function in economic research and development based on the Malaysian experience. The establishment of a center for translation, coordination, training, and collaboration among all the different languages globally in support of the theory of Islamic economics is also necessary. The transition of those nations' financial systems from a Shariah-based to a conventional one will be made easier by the easy access to English-language resources created by western economists. The language and communication channels between the Arab world and the rest of the world are the primary problems here. The issue becomes quite serious if translation in any area is unable to satisfy worldwide demands and get it into the hands of practitioners and professionals, especially considering how quickly R&D is growing. Actually, there have been both positive and negative outcomes from the translation process (Asfour, 2007)<sup>[3]</sup>. For example, through calquing or loan translation, hundreds of scientific and technological vocabulary items as well as countless more terms from a variety of fields have been added to Arabic, enriching it. However, the detrimental effects of translation on Arabic's basic structure and the way words are created and integrated are evident. This issue extends beyond poor translation skills to include Arabic original compositions that frequently have an unfamiliar sound. Analyzing the new function of translation in Belgrade University's revised Serbian curriculum, Micic (2008)<sup>[12]</sup> emphasized the importance of mastering the language. Teaching translation is crucial because it enables future medical professionals to identify the structural and genre differences between English and Serbian. Translation exercises also help teachers identify language-related comprehension issues. In reality, translators take on the role of lexicographers, which necessitates reading medical literature in both languages extensively and continuously. Research is required on the broad discourse roles of academic vocabulary as well as the behavior of words in specific topic areas (Coxhead & Nation, 2001)<sup>[5]</sup>.

Hamid & Ibrahim (2011)<sup>[7]</sup> made an effort to investigate the

necessity of preparing Arab scholars and the Arab world at large in order to eradicate backwardness and maintain the uniqueness and character of the Arabic language. Actually, the only way to accomplish this is to translate scientific text into Arabic. They proposed that a sizable Arab institution be set up to translate scientific research, and that Arab laws require universities and other relevant institutions to do so in accordance with the most recent foreign publications. Another option is to entice internationally affiliated Arab scientists to return to their home countries, where they can use their knowledge and expertise to further the Arab scientific movement. According to Fidah (2016)<sup>[6]</sup>, scientific research output in the Arab world is actually quite low. About \$1.7 billion, or over 0.3% of the Arab world's gross national product, was set aside for scientific research, according to UNESCO (2004). This demonstrates the disparity between the realities of research in the Arab world and the nations recognized for their significant contributions to the development of human knowledge. It is important to highlight that the public sector provides 80% of the funding for scientific research in the Arab world. The status of research in industrialized nations, where it is mostly supported by the private sector, stands in sharp contrast. Relatedly, Heinisch (2021)<sup>[9]</sup> investigated how terminology and translation in citizen-science initiatives might support or obstruct social innovation. Translation is essential to overcoming language and cultural barriers and reaching the public as citizen science has spread throughout the world. It is essential for the dissemination of knowledge, information, and creativity. The elements that lead to social innovation in citizen science through translation were examined, and it was shown that translation could facilitate a shift in social practices. However, more research is required to fully comprehend the effects and ramifications of translation in research generally. A historical overview of translation-into-Arabic phases, particularly the Abbasid era, as well as the major projects, programs, and initiatives in the modern era were presented by Hawamdeh *et al.* (2021)<sup>[8]</sup>. The impact of translation on Arabic as a well-structured system of knowledge and a tongue of people having borne a message to the world was looked into. A forward-looking strategy was adopted since, though translation is crucial for future advancement, statesmen and knowledge workers do not give it much thought. It was discovered that the Arabs' knowledge base had expanded, their culture had thrived, and their language had incorporated numerous lexical elements and structures. Translation eventually ties the Arab-Muslim civilization to every region of the world, allowing Arabic to influence and be influenced by it.

## 3. Research Method

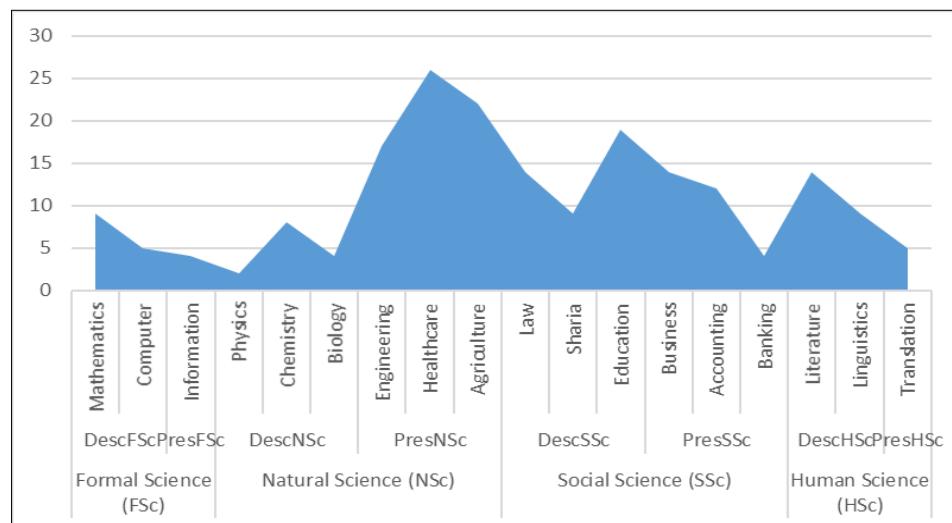
### 3.1 Sampling frame & sample size

For the theoretical population, it was all the Arabic-speaking authors in their official capacities as faculty members all over the world. As the universities and any other educational institutions were the specific places focused on, the population of concern (PoC) represented the faculty members in Jordan in general and JPU in particular. Hosting a number of one hundred ninety-seven (197) faculty members, the twelve colleges at JPU were purposefully put into four branches of science: formal, natural, social and human (see Figure 1). Chosen for such reasons as geographical proximity, availability at a certain time and easy accessibility, the personal sample of the study was intended to prove a

reliable representative of the PoC in the form of a convenience (or opportunity) sample (cf. Dornyei, 2003). In point of fact, six variables were considered to determine the demographics of the 197 respondents in two sets:

- ✓ Set 1: Academic standing, Arabic writing proficiency, and English proficiency;
- ✓ Set 2: Translation expertise, translation services, and research area.

The SPSS software was used to do descriptive statistics and give the research findings. Table 0 below lists the sample's demographic variables or characteristics. Assistant professors made up the largest percentage of survey participants (36.8% of the total sample), followed by full professors and M.A. lecturers (=21.1%) and associate professors (=18.4%).



**Fig 1:** Frequency and percentage of the faculty members at JPU

The findings regarding the sample's research writing in Arabic indicated that a majority of the study's participants consistently preferred to write research in Arabic (=34.2%). Conversely, a small percentage of participants in the study's survey were acquainted with the English language: 2.6% of the total sample had a very high familiarity (Score 5) and 13.2% of the total sample had moderate familiarity (Score 4), whereas most of the 197 respondents had a low familiarity

score (=28.9%). The findings also indicated that most of the participants possessed minimal understanding of the translation process (=28.9% of the entire sample). The findings additionally revealed that 28.9% of the study's participants never considered hiring translators for Arabic in their research projects. See also Table 1 bellow for further illustration of the demographic variables.

**Table 1:** Demographic variables of the study's participants

	<b>Demographics</b>	<b>N</b>	<b>%</b>
Academic rank	Assistant professor	14	36.8
	Associate professor	7	18.4
	Full professor	8	21.1
	M.A. lecturer	8	21.1
	Bachelor holders	1	2.6
Research in Arabic	No	3	7.9
	Yes, rarely	9	23.7
	Yes, sometimes	5	13.2
	Yes, always	13	34.2
English command	No	6	15.8
	1	5	13.2
	2	11	28.9
	3	10	26.3
	4	5	13.2
Knowledge of translating	5	1	2.6
	No	3	7.9
	1	5	13.2
	2	11	28.9
	3	8	21.1
Hiring translators	4	4	10.5
	5	7	18.4
	No	11	28.9
	Yes, rarely	2	5.3
	Yes, sometimes	4	10.5
	Yes, always	8	21.1

### 3.2 Instrumental design

The questionnaire for the present study was constructed using a basic structure that included four stages: planning, designing, translating, and piloting (cf. Churchill & Brown, 2004). In order to identify any concerns, difficulties, answers, or issues pertaining to the function(s) of translation in academic research (written in Arabic) and development, the relevant literature was first examined. A self-administered, closed-ended questionnaire was decided to be the study's approach after more than 150 assertions were determined to be significant. The aforementioned assertions were shortlisted to be ultimately 18 statements based on technical and cognitive features. In a suitable order, both content and layout as well as the highest response rates were things to be taken into account (cf. Burns & Bush, 2010): screening items to determine early on whether a respondent should complete the questionnaire, warming-up items to help pique interest in the survey, transiting items to better engage respondents and ease pressure, and other items to increase respondents' willingness to complete the questionnaire. Finally, after a week, a team member in charge translated the entire questionnaire into the English language. The corresponding author then convened a Zoom virtual meeting that was attended by a number of colleagues and M.A. students to proofread the statements and further discuss their

acceptability and/or sufficiency in both Arabic and English. A pilot study was conducted on participants who were not in the sample but shared the same PoC features in order to make sure the research issue was worthwhile. In order to assess the validity of the questionnaire and the inter-coder form reliability, seven professors served as deans or deputy deans of colleges at JPU (cf. Neuendorf, 2002; Cohen *et al.*, 2000). The study also looked at the reliability of the variables, which is significant and frequently utilized in social studies. This test's primary goal is to determine how well the subject items measure the desired variables; this is also known as internal consistency (Souza, Alexandre & Guirardello, 2017) [16]. The most often used metric for reliability assessments aimed at ensuring study validity is Cronbach Alpha (Vaske, Beaman & Sponarski, 2017) [19]. The reliability coefficient was often ranked between 0 and 1, while several assumptions addressed this matter and proposed various acceptable cut-off values. However, according to Sekaran & Bougie (2016) [15], the majority of statisticians concurred that a value of at least 0.6 is necessary to be regarded as a reliable metric. The degree of reliability increases with the coefficient value. The study's reliability results are displayed in Table 2 and were primarily deemed to have a high threshold, meeting the cut-off of 0.70 and above.

**Table 2:** Reliability results

CONSTRUCT NAME	ITEMS NUMBERS	RELIABILITY	STATUS
TECHNICAL ASPECT	9	0.772	RELIABLE
COGNITIVE ASPECT	9	0.891	RELIABLE

### 3.3 Procedures of the study

A cross-sectional quantitative method was used with a sample made up of faculty members at JPU, Jordan. The participants were reached out both in person and virtually, and an approval letter was dispatched to them as the survey was shared. The measurement items were modified based on an examination of the prior literature to develop a tool for data gathering. The questionnaire comprised various segments: demographic variables (academic position, research writing in Arabic, English fluency, understanding of the translating process, and the recruitment of Arabic translators), statements regarding the study's two elements (technical and cognitive), and a dedicated space for additional notes and comments. The tool was validated by qualified experts to assess its statements and establish if they accurately measure what needs to be measured. It was created to be available in both Arabic and English, which helped guarantee significant involvement and a range of viewpoints from the participants. The descriptive analysis was primarily used to examine the frequencies and percentages of the factors. All evaluations were performed using the SPSS. A total of 45 surveys were sent out, and 38 valid replies were returned, resulting in a response rate of 84%. Responses that had missing data or were not filled out seriously were ignored. Representations were also mapped out in graphical forms for displaying a figurative gist of the data analyzed (Creswell, 2003).

### 4. Data Analysis/Results

The study also intends to investigate the connection between academic research produced in Arabic and translation (from a language as dissimilar as English). The mean and standard

deviation (SD) were used to analyze the descriptive statistics of the primary variables. The findings for the data's normality distribution showed that a normally distributed dataset had skewness and kurtosis values ranging from  $\pm 1.00$  to  $\pm 2.00$ , respectively. The technical and cognitive relationships between translation and research in Arabic are examined in order to address the two research questions of what translational procedures faculty members might find most significant for their Arabic research projects and to what degree translation can be a useful component of academic research in Arabic at Jerash University, Jordan. In general, translation is vital in academic research; it is a multifaceted process that requires producing translations that are more precise and meaningful. Consequently, translation can enhance the reach and influence of research, allowing researchers to make their work available to a broader audience and amplify its effect. This is especially crucial for studies that hold practical significance for Arabic-speaking communities. Regardless, translators ought to take into account the target audience while translating academic research, which should encompass their knowledge levels and cultural backgrounds.

For the technical aspect, the results revealed that 52.6% of the sample sometimes turn to MT engines (e.g. Google) for a foreign text(s) in order to get general information in Arabic with a mean of 3.45 and standard deviation 0.950. They were found to prefer to use translated words or phrases even if they are odd or not common to an Arab reader with a mean of 3.29 and standard deviation 1.088 (=42.1%). Also, 65.8% of the sample believed that translation helps Arab researchers implement their own projects as the text(s) translated from other languages are unavoidable (Mean=3.66 and

SD=1.236). In addition, the perceptions about to what extent the Arabicized terms serve research in Arabic more effectively than they are merely borrowed, good agreement was found (=57.9%) with a mean of 3.58 and standard deviation of 1.200. On the other hand, the samples were asked about to which extent literal translation helps target readers understand the foreign mentality more adequately than the

free or other strategies do, the results showed low agreement (=21%). In terms of a researcher clarifying to his/her readers the cultural connotations or full implications of the words, phrases or terms translated into Arabic, 50% of the study's participants agreed with the same, with a mean of 3.45 and standard deviation of 1.005 (see Table 3).

**Table 3:** Technical impact of translation on academic research in Arabic

No.	Statement	Mean	SD
1	Translation helps Arab researchers implement their own projects as the text(s) translated from other languages are unavoidable.	3.66	1.236
2	Arab researchers demonstrate trust towards the text(s) translated into the Arabic language and never need to see the original one.	3.05	1.114
3	Arab researchers sometimes turn to MT engines (e.g. Google) for a foreign text(s) in order to get general information in the Arabic language.	3.45	0.950
4	A researcher prefers to use translated words, phrases or expressions even if they seem to be odd or not common to the Arab readership.	3.29	1.088
5	A translator is a person that specializes in a field of knowledge and is not merely a second language learner who can translate into Arabic.	3.66	1.097
6	Arabicized terms or phrases serve the academic research written in Arabic more effectively than they are merely borrowed.	3.58	1.200
7	A researcher clarifies to his/her readers the cultural connotations or full implications of the words, phrases or terms translated into Arabic.	3.45	1.005
8	A foreign sentence sometimes resists being rendered into Arabic, the matter which causes false or incomplete information.	3.45	1.058
9	Literal translation helps target readers understand the foreign mentality more adequately than the free or other strategies do.	3.61	1.054
	Technical Impact	3.35	0.650

By translating scholarly works into Arabic, researchers can make the same more accessible and increase its impact. This is important for research that has practical implications for Arab-speaking communities. The same helps bridge the language gap as many researchers in the Arab world find it difficult to access the latest research in English journals and other sources, the matter which ensures that important research findings are available to anyone who needs them. Furthermore, for translation supporting the development of research capacity by transferring academic research into Arabic, researchers can help support the development of local research capacity in the Arab world (Abdulmuttalib, 1998)<sup>[1]</sup>. This can help create a more vibrant and diverse research community, which in turn can lead to new discoveries and innovations that benefit everyone (Hamid & Ibrahim, 2011)<sup>[7]</sup>. In this spirit, translation is to be such a collaborative effort that many institutions in the Arab world might establish special units or partnerships with any competent facilities or corporate bodies (cf. Lahsasna, 2004)<sup>[11]</sup>. Collaborative efforts between translators and researchers can help ensure that the translation is of high quality and that it meets the target reader's needs. Overall, it is critical to ensure that the translation of any scholarly work is accurate and faithful, and the subject matter must be deeply understood and conveyed

clearly and concisely.

Cognitively, however, the results revealed that 68% of the sample agreed that translation is recognized to them as an important outlet to see other intellectual heritages and various achievements (Mean=3.92 and SD=1.239). Also, 63.1% of the participants—with mean 3.71 and standard deviation 1.271—believed that research is in continuous development due to the accumulation of knowledge in translated research. For translations to be research works or scientific efforts taken into account in academic promotions, it was shown that 60.5% of the study's sample believe so; the mean of the same was 3.68 and SD 1.276. It was also demonstrated that 57.9% of the participants refer to foreign resources for their works to collect new facts or revise existing results with a mean of 3.53 and SD of 1.484, while 28.9% use resources dating back to the seventies or eighties, the matter which reflects the scarcity or absence of any modern ones (Mean=2.87 and SD=1.044). However, 47.3% of the sample knew that the translator is proficient in the mother and foreign tongues and specialized in the material to be addressed and 29% to know that he/she acts as a transmitter of a new text, bringing in another reader with special linguistic and cultural peculiarities with a mean of 3.45, 3.13 and SD of 1.058, 0.844 respectively (see Table 4).

**Table 4:** Cognitive impact of translation on academic research in Arabic

No.	Statement	Mean	SD
1	A university professor often refers to foreign resources for his/her works to collect new facts or revise existing results.	3.53	1.484
2	A researcher mostly uses resources dating back to the 70s or 80s, which reflects the scarcity or absence of any modern ones.	2.87	1.044
3	A researcher knows that translators act as transmitters of new texts, bringing in other readers with special linguistic and cultural peculiarities.	3.13	0.844
4	A researcher knows that the translator is proficient in the mother and foreign tongues and specialized in the material to be translated.	3.45	1.058
5	A researcher knows that translation is an important outlet to see other intellectual heritages and various achievements.	3.92	1.239
6	An Arab researcher sees that translation contributes to national development and translator are partners to research work.	3.92	1.100
7	A faculty member believes that translation is a research work or scientific effort taken into account in academic promotions.	3.68	1.276
8	A faculty member believes that research is in continuous development due to the accumulation of knowledge in translated research.	3.71	1.271
9	A researcher who depends on translation seeks to develop (not only receive) what is found out for the good of his/her community.	3.58	1.081
	Cognitive Impact	3.53	0.854

A thorough understanding of the source text is essential for producing precise, high-quality translations. Therefore, it is important to carefully read and analyze the source text(s) to comprehend its meaning, context, and intended audience (Lahsasna, 2004) [11]. The same requires the use of appropriate translation strategies; different ones can be used to convey the meanings of a given text adequately and acceptably. These strategies include literal translation, cultural adaptation, modulation, paraphrasing, and dynamic rendering. In translating scholarly works, different language systems and cultural backgrounds must be judiciously considered. Translators should be aware of these disparities between such source and target languages as Arabic and English. This includes idioms, expressions, and cultural references, which can affect the meaning of the text and need to be taken into account during the translation process (cf. Micic, 2008) [12]. So using precise and appropriate terminology is a must in academic research; this is essential for conveying meaning accurately. Translators should use appropriate terms and ensure consistency across the entire output (Heinisch, 2021) [9]. For the same, the target audience should be considered by those in charge of the translating task(s), including their levels of knowledge, backgrounds, and cultural contexts. By following these recommendations, translators can enhance the cognitive aspect of translation and produce accurate and meaningful products in academic research from English to Arabic or vice versa.

This study tried to solve two primary difficulties by examining the interaction between academic research conducted in Arabic and translation from English, a completely different language. Technical and cognitive elements were examined to determine what translational processes faculty members could find most significant for their Arabic research projects and how much translation can contribute to academic Arabic research at Jerash University. In general, translation is an essential component of academic research; it is a complicated process that requires the production of more precise and significant translations. Translation can therefore aid in expanding the effect and reach of research by making it available to a larger audience or audiences. For studies that have applications for Arab-speaking communities, this is especially crucial. In any case, translators ought to gain a deep comprehension of the original

material because a good translation requires a deep comprehension of the original text. To properly understand the original text's content, context, and target audience, it is also crucial to carefully study and evaluate it (Hawamdeh *et al.*, 2021) [8]. By translating academic research into Arabic or relying on translation in their scholarly works, Arab academics contribute to the growth of their knowledge communities. Translation can also boost local research capabilities. New inventions and discoveries may result from a more active and varied community.

## 5. Conclusion

Many studies are likely to rely extensively on translation for data in multiple languages, and translation has contributed to the accumulation of a vast lot of information. However, either the translator's participation or the translation itself is not fully acknowledged in a research act, importing material from other languages appears to be occasionally ambiguous or even unrecognized. In this regard, a number of questions must be answered, such as whether hiring a translator is truly required, whether the identity of the translator or the translational act must be disclosed in the research, whether it matters who performs the translation, whether the translation techniques affect the researcher's reliance on translation in the research, and whether the Arab researcher recognizes the value of translation. Another issue that needs to be addressed is the degree to which translators participate in any kind of study (in Arabic). In the Arab world, translation is crucial to the advancement of scholarly study, and scholars rely to varied degrees on translations or translators. The credibility of the scientific translation in academic circles is one of the primary factors that determines how much a researcher relies on translations to further his or her work. However, some researchers choose to domesticate portions of their research, ignoring the role of translators (Temple & Young, 2004, p. 175; Pereira *et al.*, 2009, p. 2).

## References

1. Abdulmuttalib F. Translation and scientific research. *Alamat in Criticism J.* 1998;29. Jeddah, Saudi Arabia.
2. Abdulwarith M. Obstacles of scientific research in the light of the lack of civil society institutions for its importance. *Menoufia Univ J.* 2020;76:301-374.
3. Asfour MH. Impact of translation on the Arabic

language. Univ Sharja J Humanit Islamic Sci. 2007;4(2):195-216.

4. Bahloul H. The reality of scientific research in the Arab countries: obstacles and proposals for development (Case of Tunisia). Future Soc Sci J. 2021;5:51-91.
5. Coxhead A, Nation P. The specialized vocabulary of English for Academic Purposes. In: Flowerdew J, Peacock M, editors. English for Academic Purposes. 2001. p. 252-267.
6. Fidah E. Obstacles of the academic research: Jordan as a case study. Sultan Qaboos Univ J Arts Soc Sci. 2016;5-11.
7. Hamid A, Ibrahim Z. The role of translation in academic writing in Arabic. In: Proceedings of the Ninth Annual Symposium of the Arabic Language; 2011; Damascus, Syria.
8. Hawamdeh MA, *et al*. A concise review of prominent phases and impacts of translation on Arabic intellectually and linguistically. J Arts Hum Soc Sci. 2021;71:29-42.
9. Heinisch B. The role of translation in citizen science to foster social innovation. Cent Trans Stud, Univ Vienna. 2021;Vienna.
10. Katab H. The importance of translation in developing scientific research in Arabic. M'sila Univ J. 2009;13:34-46.
11. Lahsasna A. The role of translation in research and development in Islamic economics. INCEIF, The Global University, Kuala Lumpur. 2004;427-449.
12. Micic S. The role of translation in undergraduate medical English instruction at the University of Belgrade, Serbia. Ibérica. 2008;16:169-181.
13. Odacioglu MC. The role of translation studies and translation theory in the Far East. In: 5th International Conference on Lifelong Education and Leadership for All ICLEL; 2019; Azerbaijan State University of Economics. p. 63-78.
14. Pereira M, *et al*. Interrogating language difference and translation in social science research: Towards a critical and interdisciplinary approach. Grad J Soc Sci. 2009;6(3):1-12.
15. Sekaran U, Bougie R. Research methods for business: A skill-building approach. John Wiley & Sons; 2016.
16. Souza A, Alexandre N, Guirardello E. Psychometric properties in instruments evaluation of reliability and validity. Epidemiol Serv Saude. 2017;26:649-659.
17. Temple B, Young A. Qualitative research and translation dilemmas. Qual Res. 2004;4(2):161-178.
18. Van Hoof H. The language of medicine: a comparative mini-study of English and French. In: Fischbach H, editor. 1998;49-65.
19. Vaske J, Beaman J, Sponarski C. Rethinking internal consistency in Cronbach's alpha. Leisure Sci. 2017;39(2):163-173.
20. Waladali E. The relationship between scientific research success factors and scientific research productivity: The case of the Arab American University. Arab Am Univ J Res. 2019;5(1):15-48.