Lack of English Language Proficiency as a Limiting Factor in Faculty Members' Contribution to Science: Data from Two Iranian Universities

*Nasrin Shokrpour, PhD[1], Professor, (Corresponding author)
English Department, Faculty of Paramedical Sciences, Shiraz University of Medical Sciences, Shiraz, Iran
SMJ Mortazavi[2], Professor of Medical Physics, Faculty of Paramedical Sciences, Shiraz University of Medical Sciences

Z Hashemi[3],
International Affairs Department, Rafsanjan University of Medical Sciences

Abstract:

Scientific output in the form of publications is among the main indicators of scientific development. Research output in Iran has dramatically increased in recent years and Iranian universities have steadily attempted to promote their role in global science production over the past years. Identifying different factors affecting the extent of contribution of each institution to the production of science and technology is the first step for its sustainable scientific development. This study aimed to determine the role of academic rank, work experience and language barrier in faculty members' contribution to science. This cross-sectional study was performed on 54 and 28 faculty members from two universities in Iran. A general English language proficiency test and a questionnaire were used to collect the data. No link was found between English language proficiency and science production. Also, there was no relationship between the existence or lack of outside university English education and the extent of science production of the faculty members. Furthermore, the results obtained in this study clearly showed a significant relationship between the academic rank of medical educators and the extent of their contribution to science. It was concluded that while English language proficiency could not be regarded as a reliable indicator of scientific output of the faculty members, academic rank guarantees a considerable scientific output.

Keywords: Contribution to science, English language, Language barrier, Faculty members.

1. Introduction

Scientific output in the form of publications is among the main indicators of scientific development. According to Djadri (2006), enhancement of research based activities and concerns over this issue will lead to advancement of each country. Scientific production or output in many countries has had an enhancing trend during the last decade, especially in medical fields (Nouri

et al, 2006, Aminpour et al, 2010, Saboori, 2003). Islamic Republic of Iran has substantially increased its presence in global science in recent years (Science Watch, 2003). In 2004, based on the publication output, Iran ranked 4th among the Islamic countries (Mehrdad et al., 2004). Now, excluding Turkey, Iran is the first leading producer of science among the Muslim and neighboring countries (Saboury and Poursasan, 2006, 2007). On the other hand, citations to research conducted by Iranian scientists have also increased (ISI, 2006).

A research-oriented policy during the last ten years has led to an increase in publications mainly in the field of humanities (Borchart, 2003). Despite the fact that there is a lot of good research in IR Iran, most of them are usually published in national journals; therefore, they are not noted by the scientific world. For this reason, the Iranian policy makers encouraged researchers to publish their results internationally. A report published by Senior Scientist states that "The research in life sciences in Iran is going to be better than before very quickly. At the moment, there is a high attention paid by the government, policy makers and universities to push researchers to go ahead, encouraging them to publish their results internationally" (Senior Scientist, 2003) since , as Amirsalari (2008) concluded, the number of published articles is regarded as a significant indicator of improvement in each country.

In Iran, nearly all of the faculty members are Persian-speaking teachers. As medical sciences are being taught in Persian and major educational resources are Persian or translated textbooks, there is usually no need for the faculty members and their students to become proficient in the use of English. Nowadays, in some universities, English language assessment is a part of the evaluation process for those who apply for the position of a faculty member. However, after employment there is usually no concern about the English language competence of the faculty members. Lack of diagnostic language screening for faculty members has led to low level of English language proficiency among the medical educators. Medical Science Universities are not an exception and non-Iranian (native English speaking) faculty members are scarce. Medical science universities and medical research centers are under the auspices of the Ministry of the Health and Medical Education. Over the past years, Iran's contribution to science and technology has increased dramatically. Iran, India, Hungary and Egypt produce most of their papers in the field of chemistry; in particular, more than 30% of scientific papers from Iran and Egypt are published in chemistry related journals (Borchart, 2003). Scientific production of the scientists in SUMS as a type one university has increased during 1959-2011, with its peak in 2011.

Iranian researchers published 2.5 times more papers in 2001 than in 1997 with an annual average growth rate of 23.4% from 1992 to 2001. The government research policies in the past few years are believed to be the reason for this increase. Furthermore, the inclusion of three Iranian source journals in the SCI has played a significant role in increasing the access of Iranian researchers to international databases (Osareh and Wilson, 2002). University of Tehran, Tehran University of Medical Sciences and Tarbiat Modarres University were the three leading

institutions which published the most basic life sciences papers (180, 173, 101 papers, respectively) during 1992-2001 (Borchart, 2003). Chemistry, physics and clinical medicine are the three top scientific fields for Iran when ranked by the number of citations.

Scientific publications, i.e. the number of articles published *in scientific journal, can be considered as a reliable indicator of science production. Although there are various systems of article citation in the world, Science Citation Index (SCI) of the Institute for Scientific Information (ISI, Thomson Scientific, Philadelphia, PA, USA) is a widely recognized database for citations (Barre, 1998).*

Even the current level of science production in IR Iran is much less than the scientific potential of Iranian scientists. Moin et al (2005) has report the Iranian scientific output from 1961-2005 and compared the results with those of 15 countries. The results revealed an increase in scientific output in Iran from 0.0003% in 1971 to 0.20% in 2003.

Many factors contribute to the increase in such output. They include increase in the last few years in research funding, establishment of research centers in many universities and the increase in the number of educated people. (Habibi, et al, 2006). In this light, language barrier might be considered as a limiting factor for scientists to publish their articles in the international journals, especially those which are being indexed by the ISI. Although the relationship between English language proficiency with many other factors as academic success, performance, reading comprehension, etc. has been researched so far (Stevens, et al, 2000, Bayliss and Raymond, 2004, Garcia-Vasquez, et al, 1994), there are few studies on the relationship between English language proficiency of the academic staff and their scientific production. Therefore, the main purpose of this study was to assess the relationship between English language proficiency and contribution to science and technology in the faculty members at two different universities, Shiraz University of Medical Sciences (SUMS) as a type-I university and Rafsanjan University of Medical Sciences (RUMS) as a type-II university, in the academic year 2009-2010.

2.Methods

2.1.Participants

This cross-sectional study was performed on 82 faculty members of Shiraz University of Medical Sciences (SUMS) and Rafsanjan University of Medical Sciences (RUMS) in the academic year 2009-2010. The academic rank of the participants included full professors (n=2), associate professors (n=17), assistant professors (n=37) and instructors (n =26). RUMS had no full professor at the time of the study and all the professors who participated in this study were from SUMS.

2.2.Instruments

At first, to evaluate the participants' general English proficiency a general English language proficiency test comprising of reading, writing, grammar, vocabulary and a translation task (from Persian to English and English to Persian) was devised and administered to the participants. The reliability of the test was piloted on 20 faculty members; it proved to have sufficient reliability (.86). After completing the test, the participants filled out a questionnaire which included demographic data, and questions onacademic rank and achievements (including the number of papers they had published in the international English-language scientific journals). The questionnaire was also pilot-tested for clarity and its content validity and confirmed by a group of experts. In this study, publication was considered as a monitor of scientific activity (Malekzadeh et al., 2001). The scores (out of 25) were classified into 3 groups of intermediate (over 20), lower intermediate (15-20), and elementary (under 15). The data were analyzed by appropriate statistical tests including ANOVA, student's t-test and Chi-square.

3.Results

3.1. Overall Data

3.1.1. SUMS

Considering the publication of papers indexed in ISI, the publication rate was 4.78±4.07 (mean±SD) for those papers in which the participant was either the 1st author or the corresponding one and 4.37±4.67 for the papers with the participant as the 2nd author or more.

Moving to papers indexed by other well-known indexing agencies, e.g. Chemical Abstracts, the publication rate for those papers with the participant as the 1st author was 4.37±4.30 (mean±SD), and 3.14±2.97 for the papers with the participant as the 2nd author or more.

For non-indexed English papers, the publication rate for those papers in which the participant was the 1st author was 3.06±2.33 (mean±SD), and 1.89±1.68 for the papers with the participant as the 2nd author or more.

The scores of grammar, vocabulary, reading, translation from Persian to English, and translation from English to Persian (out of possible 5) were 3.67±1.35, 3.04±1.39, 2.72±1.12, 3.85±1.25, and 3.44±1, respectively. (mean±SD).With regard to the above 4 sections, the 54 participants received 16.43±5.07 points (out of 25).

3.1.2.RUMS

The overall publication rate for all the 28 participants was 7±9.49 (mean±SD) papers. As to the publication of papers indexed in ISI, the publication rate was 1.22±1.87 (mean±SD) for those papers in which the participant was the 1st author and 1.37±2.59 for the papers with the participant as 2nd author or more.

In other well known indexing agencies, e.g. Chemical Abstracts, the publication rate for the articles in which the participant was the 1st author was 1.33 ± 2.09 (mean$\pm$SD), and 1.30 ± 2.76 for the papers with the participant as its 2nd author or more.

As to the non-indexed English papers, the publication rate for the studies with the participant as the 1st author was 1.41 ± 3.17 (mean$\pm$SD), and 0.37 ± 0.97 for the papers with the participant as its 2nd author or more.

The scores of grammar, vocabulary, reading and translation (out of 10, 5, 5, and 5) were 7.22 ± 1.60, 2.70 ± 1.23, 3.15 ± 1.23 and 3.52 ± 1.52 (mean$\pm$SD), respectively. Totally, the 28 study participants received 16.63 ± 4.46 points (out of 25).

3.2. Academic rank

3.2.1. SUMS

Considering the publication of papers indexed in ISI, the publication rates for those papers in which the participant was the 1st author were 2 ± 0, 4.0 ± 3.19, 6.67 ± 4.72, and 12 ± 0 (mean$\pm$SD) for instructors, assistant professors, associate professors and full professors, respectively. On the other hand, these rates were 3.0 ± 2.65, 5.07 ± 6.39, 4.0 ± 0.93, and 3.0 ± 0 for ISI papers in which the participant was its 2nd or next author (Table 1).

As to papers indexed by other well-known indexing systems, e.g. Chemical Abstracts, the publication rates for those papers with the participant as the 1st author were 1 ± 0, 3.5 ± 2.72, 6.89 ± 5.58, and 4 ± 0 (mean$\pm$SD) for instructors, assistant professors, associate professors and full professors, respectively.

For non-indexed English papers, the publication rates for those papers in which the participant was the 1st author were 2.67 ± 1.53, 3.67 ± 3.27, 2.71 ± 2.06, and 3 ± 0 (mean$\pm$SD) for instructors, assistant professors and associate professors, respectively.

As to grammar scores (out of possible 5), the instructors, assistant professors, associate professors and full professors obtained 3.40 ± 1.14, 3.94 ± 1.35, 4.30 ± 1.06 and 5 ± 0 (mean$\pm$SD) points, respectively. With respect to vocabulary scores (out of possible 5), the instructors, assistant professors and associate professors obtained 2.80 ± 1.20, 3.17 ± 1.69, 3.67 ± 1.00, and 4.0 ± 0.00 (mean$\pm$SD) points, respectively.

In reading (out of possible 5), the instructors, assistant professors and associate professors obtained 2.65 ± 0.93, 2.78 ± 1.11, 3.11 ± 1.17, 3.0 ± 0 (mean$\pm$SD) points, respectively. In translation from Persian to English (out of possible 5), the instructors, assistant professors and associate professors had 3.80 ± 1.10, 4.17 ± 0.99, 4.10 ± 0.88, and 4.0 ± 0 (mean$\pm$SD) points, respectively. As to that from English to Persian (out of possible 5), the instructors, assistant professors and

associate professors obtained 3.50±0.98, 3.75±1.50, 3.43±1.48, and 4.9±0 (mean±SD) points, respectively.

Taking all of the above 5 sections into account, the instructors, assistant professors and associate professors obtained 16.05±3.51, 17.33±6.15, 17.93±3.80, and 20±0 (out of 25) total points, respectively. The observed difference among the overall English scores of these academic ranks was statistically significant (P<0.001).

3.2.2. RUMS

The instructors, assistant professors and associate professors' overall publication rates were 1±1.53, 5.19±7.71, and 19.8±9.47 (mean±SD) papers, respectively. The observed difference among overall publication rates of these academic ranks was statistically significant (P<0.001). Considering the publication of papers indexed in ISI, the publication rates for those papers in which the participant was the 1st author of the paper were 0±0, 1.06±1.77, and 3.2±1.92 (mean±SD) for instructors, assistant professors and associate professors, respectively. On the other hand, these rates were 0.43±1.13, 1.43±3.12, 2.2±1.79 for ISI papers with the participant as its 2nd or next author (Table 1).

Moving to papers indexed by other well known indexing systems, e.g. Chemical Abstracts, the publication rates for those papers in which the participant was the 1st author were 0±0, 1.13±1.93, and 3.6±2.30 (mean±SD) for instructors, assistant professors and associate professors, respectively. These rates were 0.29±0.76, 0.69±1.40, and 4.4±5.13 for ISI papers with the participant as its 2nd or next author.

For non-indexed English papers, the rates of the publication for those articles in which the participant was the 1st author were 0±0, 0.56±1.55, and 5.8±5.12 (mean±SD) for instructors, assistant professors and associate professors, respectively. These rates were 0.28±0.49, 0.31±1.01, and 0.6±1.34 for ISI papers with the participant as its 2nd or next author.

As to grammar scores (out of possible 10), the instructors, assistant professors and associate professors obtained 5.71±1.38, 7.75±1.48, and 7.2±1.30 (mean±SD) points, respectively. In the vocabulary section (out of possible 5), the instructors, assistant professors and associate professors had 2.43±1.13, 2.56±1.26, 3.6±0.89 (mean±SD) points, respectively (Table 2).

As to the reading, (out of possible 5), the scores of the instructors, assistant professors and associate professors were 2.29±1.50, 3.13±1.15, and 4±0.71 (mean±SD) points, respectively. In translation, (out of possible 5), the instructors, assistant professors and associate professors obtained 2.18±1.18, 3.73±1.60, and 4.2±1.02 (mean±SD) points, respectively.

With respect to all of the above 4 sections, the instructors, assistant professors and associate professors' scores were 12.61±3.17, 17.17±4.54, and 19.2±1.43 (mean±SD), respectively. The observed difference among the overall English scores of these academic ranks was statistically significant (P<0.05). Table 3 shows the contribution of each academic rank in science production (total publications as well as publication per faculty member).

3.3. English Language Proficiency

3.3.1.SUMS

The participants of the study were classified into 3 categories of intermediate, lower intermediate, and elementary according to their English language scores. The number of 1st authored or corresponding ISI publication rate of these groups was 6.18±4.96, 4.60±3.50, and 2.86±2.67 (mean±SD) papers, respectively. Analysis of these data showed no statistically significant difference among the above-mentioned groups

in the case of ISI papers as the 2nd author or more.

3.3.2.RUMS

The participants were classified into 3 categories of intermediate, lower intermediate, and elementary according to their English language scores. The overall publication rates of the participants at intermediate, lower intermediate and elementary levels of English proficiency were 7.83±9.56, 6.54±9.58, and 6.33±10.11 (mean±SD) papers, respectively. There was no statistically significant difference among the above-mentioned groups.

3.3. Outside University English Language Education

3.3.1. SUMS

According to their background of outside-university English education (OUED), the participants were classified into 3 categories of OUED=0 yr, OUED<1 yr, and OUED>1 yr. The overall publication rates of these groups were 12.3±9.86, 6.5±9.73, and 0.13±0.35 (mean±SD) papers, respectively. The overall English scores of these groups were 17.03±5.36, 15.03±4.69, and 17.32±3.24 (mean±SD), respectively. While there was no link between the outside-university English education of faculty members and their English scores, a statistically significant relationship was found between the outside-university English education of faculty members and their science production, i.e. their publications. (P<0.05)

3.3.2. RUMS

The participants were classified into 3 categories of OUED=0 yr, OUED<1 yr, and OUED>1 yr according to their background of outside-university English education (OUED). The overall publication rates of these groups were 12.3±9.86, 6.5±9.73, and 0.13±0.35 (mean±SD) papers, respectively (Figure 7a). The overall English scores of these groups were 17.03±5.36, 15.03±4.69, and 17.32±3.24 (mean±SD) points, respectively. The trend was similar to that of the faculty members of SUMS; a statistically significant relationship existed between the outside-university English education of the faculty members' science production ($P<0.05$); on the other hand, there was no link between the outside-university English education of the faculty members and their English scores.

4. Discussion

Iranian universities are not that concerned about the English language competence of their lecturers (especially after employment) who are entirely native speakers of Persian. Currently, none of the medical courses are taught in English and there is no any English language assessment for testing the language proficiency of the faculty members. Also, there are few English courses for those faculty members who are not proficient in the use of English. This is the reason that we simply thought that possibly there was a relationship between English language competence of the faculty members and their scientific output. Interestingly, we could not observe such a link. However, we found many important factors that play an important role in the science production of faculty members.

Science and technology can be considered as the most significant component of capabilities of countries. Today, these factors that are fundamental preludes to the sustainable development of each country are considered as factors much more important than economic, political, and military capabilities as well as having rich natural resources (SCCR, 2005). During the 7th and 15th centuries, the era known as the Dark Ages in the West, Muslim scientists made great contributions to science. However, the process of science development gradually languished in the Islamic nations around 16th century. Fortunately, during the last few decades, the Muslim nations have started to realize what they have missed out. Since then there has been a growing rate of "science production" within Muslims countries (Gard, 2007).

Research output in Iran has increased substantially both in quality and quantity. Despite the fact that there is a lot of good research in IR Iran, since the results are usually being published in national journals it is not noted by the world. Therefore, Iranian policy makers have been encouraging researchers to publish their research internationally. This policy has led to a 10 fold increase in Iran's science production from 1995 to 2005 which ranked Iran as the first, while China with only a 3 fold increase is the second country (CDFMIC, 2007).

In order to get their yearly promotions, the faculty members have to publish at least one or two papers in the scientific journals either in Persian (Farsi) or English and as there are many scientific journals in Iran, the faculty members are involved widely in publishing their papers. There are many researchers who have published considerable amounts of papers in Persian language journals but have not even one paper in English language journals.

The results of this study did not reveal a relationship between English language proficiency and scientific output of faculty members. Academic members with lower levels of proficiency in English did not reveal a lower academic performance. In the same sense, academic members with higher levels of proficiency did not have more papers published in the journals indexed by ISI. Although this correlation at first seems to be unexpected and irrational, a closer look might reveal other factors that significantly impact the scientific output of the faculty members. On the other hand, as the majority of papers have more than 1 author, if only one of the members of the team is proficient in English use, they would have no problem in publishing their articles in English.

In this study, academic rank of faculty members was the leading factor determining the scientific output of faculty members. A point worth considering is the fact that all the associate professors who participated in this study have graduated from universities in English speaking countries or had taken their sabbatical leaves abroad. This clearly shows the importance of short term scientific visits. Another factor that needs to be highlighted is work experience. A statistically significant relationship was found between the work experience of faculty members and their science production as publications. As associate professors in Iran in optimal conditions may not have less than 4-5 years of work experience, this may be the reason that such a link exists between work experience and science production.

Interestingly, having a history of outside university English Education had a negative effect on scientific output of faculty members. This can be simply explained by the fact that in this study none of the associate professors had participated in outside university English classes. On the other hand, lecturers who had no considerable publications had tried to learn English language through outside university courses in the hope of passing entrance exams for continuing their studies toward a PhD degree.

English language instruction in the universities in Iran is based on general as well English for academic purposes (EAP) and English for specific purposes (ESP). Due to time limitation and the focus of the curriculum, which is basically on reading comprehension, the English teachers (who themselves are non-native) are not able to teach English integratively, i.e. teaching all the four skills of reading, writing, speaking, and listening together. As Stern (1992) states, proficiency goals consist of general competence in English, command in the 4 skills, or mastery of specific language tasks. In such situations, the learners do not grasp English as well as they should and this is one of the deficits of language instruction in Iran, which by itself needs further

studies. On the other hand, there are many private language institutions in Iran whose methods of teaching English are based on the latest language schools of the world. However, the instructors are not competent and proficient enough to teach effectively. In these institutions the students not only learn all the four skills but are trained on IELTS and TOEFL exams as well. In this light, it was not surprising that there was no link between outside-university English Education and English exam scores.

Although the citation database of ISI has been widely accepted by researchers in different countries, this quantitative index has been criticized recently (Arunachalm, 2004). As even important publications are not cited or poorly cited in an initial period of 3-5 years, using only the SCI as an indicator of scientific output seems to be problematic. This was the reason that in this study we considered indices other than SCI of ISI as well as non-indexed papers.

Another factor worth considering could be that indexed publications by themselves would not guarantee the production of patents and new technologies. It is believed that about two thirds of the researchers in the industrialized countries are engaged in developmental activities that lead to patents and new technologies, while in developing countries, scientists are merely doing research for their own sake (Mehrdad et al., 2004).

5. Conclusion

In this study, the relationship between English language proficiency of faculty members of Rafsanjan and Shiraz Universities of Medical Sciences and their extent of contribution to science was evaluated. Based on the results obtained in this study, it was found that no association existed between English proficiency and science production of faculty members. It was also found that higher academic rank had a significant relationship with faculty members' science production. However, in some studies such as that of Nouri and Danesh (2008), improving the faculty members' English proficiency is a way of improving our country's global scientific place. According to the results of this study, while English language proficiency could not be regarded as a good indicator of scientific output of the faculty members, academic rank guarantees a considerable scientific output.

References

Aminpour, F., Kabiri, p., Boroumand, M.A., Keshtkar, A.A., Hejazi, S.S. (2010). Iranian medical universities in SCIE: Evaluation of address variation. Scientometrics, *doi: 10.1007/511192-010-0248-y.*

Amirsalari, S. (2008). Scientific production on pediatrics in Iran's universities of medical sciences. Iran Pediatrics Disease, *18(3), 214-227.*

Arunachalam, S. (2004). On Publication Indicators. Current Science, *86(5), 629-632.*

Bayliss, D., Raymond, P.M. (2004). The link between academic success and L2 proficiency in the context of 2 professional programs. The Canadian Modern Language Review, *61(1), 29-51.*

Borchart, A.M. (2003). Background report on research and education in resource constrained countries. Germany.

Barre R. (1998). UNESCO. World Science Report. Elsevier: UNESCO Publishing: 22

CDFMIC, The first conference of deans of medical faculties of Islamic countries, Kish Island, 2007.

Djadri, T. (2006). Surveying research activities of faculty members in Jundi Shapour university, Ahvaz 1991-2005. A paper presented at the first seminar on research activities in obstetrics, Ahvaz.

Gurcia-Vazquez, E., Vasquez, L.A., Lopez, I.C., Ward, W. (1997). Language proficiency and academic success: Relationship between proficiency in two languages and achievement among Mexican American students. *Bilingual Research Journal*, 21(4). 334-347.

Gard FS. *(2007). Islamic Science and Scientists. Sultan Qaboos University, College of Science News Bulletin. Newsletter,* Issue 2.

Habibi, G., Rashidi, A., Feldman, M.D. (2006). Emerging concerns about Iran's scientific and medical future. *Lancet*, 368 (9540), 985.

Malekzadeh, R, Mokri, A, Azarmina, P. (2001). Medical science and research in Iran. *Arch Iran Med*. 4(1), 27-39.

Noori, R., Norouzi, A., Mirzaee, A. (20060. Science production of IUMS researchers as appeared in the web of science from 1979-2006. *Health Information Management*, 3(2), 73-82.

Osareh, F., Wilson, C.S. (2002). Collaboration in Iranian scientific publications. *Libri*, 52, 88-89.

Mehrdad M, Heydari A, Sarbolouki MN, Etemad S. (2004). Basic science in the Islamic Republic of Iran. *Scientometrics*, 61(1), 79–88.

Moin, M., Mahmoudi, M., Rezai, N. (2005). Scientific output of Iran at the threshold of the 21st century. *Scientometrics,* 62(2), 239-248.

ISI Web of Knowledge (2006). What are your colleagues researching and what impact is their work having on the global research community? *The Thomson Corporation* 05/06 A6031.

Saboury, A. (2003). Resaerch status report of Iran, 2002. *Rahyaft*, 28, 78-95.

Saboury A., Poursasan N. (2006). Science production in Iran-2005. *Rahyaft*, 37,49-52.

Saboury A., Poursasan N. (2007). Science production in Iran-2006. *Rahyaft*, 38, 56-61.

SCCR. (2005). A glance at science and technology situation in the Islamic Republic of Iran. The Board of Supervision and Assessment of Cultural and Scientific Affairs Supreme Council of Cultural Revolution (2005-06).

Science Watch (2003). Middle Eastern Nations Making Their Mark. 14 (6).

Stern, H.H., (1992). Issues and options in language teaching: Oxford: Oxford Uni. Press.

Stevens, R.A., Butler, F.A., Castellon-Wellington, M. (2000). Academic language and content assessment: Measuring the progress s of English language learners. National center for research on evaluation, standards and student testing. Uni. of California, Los Angeles.

Nouri, R., Danesh, F. (2008). Scientific production of academic members in web of science during 2000-2005 and effective factors: a case study in Isfahan University of Medical Sciences. Obtained from www.collnet.de/Berlin-2008/ Nouri WIS 2008 spa.pdf.

Table 1. Demographic and Job Data of the participants

Participant	Freq (%)
University	
SUMS	56 (65.1%)
RUMS	26 (30.2%)
Missing	4 (4.7%)
Latest Degree	
Master	24 (27.9)
Ph.D or MD	51 (59.3%)
Fellowship	2 (2.3%)
Subspecialty	2 (2.3%)
Missing	7 (8.1%)
Academic Rank	
Lecturer	26 (34.2%)
Assistant Prof	34 (39.5%)
Assistant Prof	15 (17.4%)
Prof	1 (1.2%)
Missing	10 (11.6%)
Teaching Experience	

<1 year	7 (8.1)
1-2.99 years	8 (9.3%)
3-4.99 years	12 (14%)
5-9.99 years	17 (19.8%)
≥10 years	32 (37.2%)
Missing	10 (11.6%)

Place Degree Obtained

Iran	69 (80.2%)
Abroad English Speaking country	9 (10.5%)
Missing	8 (9.3%)

Attendance at Non-university Classes

Yes	34 (39.5%)
No	44 (51.2%)

Table 2. Comparison of the English language proficiency scores of SUMS and RUMS faculty

English language proficiency scores	Score (Mean ±SD)	
	SUMS	RUMS
1st Score (Grammar)	3.67 ± 1.35	3.16 ± 0.82
2nd Score (Vocabulary)	3.04 ± 1.39	2.07 ± 1.18
3rd Score (Reading)	2.72 ± 1.12	3.00 ± 1.30
4th Score (Translation from P to E)	3.85 ± 1.25	3.60 ± 1.50
5th Score (Translation from E to P)	3.43 ± 1.47	3.61 ± 0.82

P: Persian (Farsi)   E: English

Table 3. Correlation between the number of ISI papers (1st authored) and English language proficiency in each section

English language proficiency scores	Correlation Coefficient (Sig. 2-tailed)	
	Number of ISI papers (1st authored or corresponding)	Number of Original papers (1st authored or corresponding)
1st Score (Grammar)	0.156 (0.264)	0.350 (0.080)
2nd Score (Vocabulary)	0.285 **(0.034)**	0.269 (0.185)
3rd Score (Reading)	-0.024 (0.862)	0.258 (0.202)
4th Score (Translation from P to E)	0.146 (0.218)	0.232 (0.254)
5th Score (Translation from E to P)	0.88 (0.530)	-0.119 (0.561)
Overall Score	0.256 (0.065)	0.326 (0.104)

P: Persian (Farsi)   E: English