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Barriers to research productivity in Islamic Azad University: exploring faculty members perception

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Abstract

Today, faculty members continue to struggle with their teaching requirements and conflicts research productivity pressures place on their teaching and mentoring time with students. This project is aimed to explore the existing barriers to research productivity based on faculty members perspectives. The findings of the study indicate that participating faculty members of IAU were not evenly interested in research opportunities due to the diverse mission objectives promoted by their respective institutions. Faculty members employed in 8th districts of Islamic Azad University was not generally concerned with their research productivity and subsequent factors due to lack of financial, poor knowledge on research skills, heavy workload and etc. which negatively impact their research productivity. To cope these barriers, institutional strategies should be redefined, faculties' incentives should be motivated and departments should be well equipped.

Keywords: Research productivity, Barriers, Islamic Azad University, Faculty member

Introduction

Research productivity (RP) of the faculty members is of growing importance in higher education institutions worldwide (Green & Baskind, 2007) and research scholarship, specifically in reputed peer-reviewed publication, seems essential to success of a faculty member at most universities (O'Meara, 2005). In consequence, more emphasis is to explore faculty research output and strategies to improve RP (Teodorescu,2000; Spiegel,2003; Vyhmeister&Vyhmeister,2007).

Due to significant role of RP in institution and even more for faculty members, many researchers explored influencing factors on productivity to find out the barriers and provide opportunities and strategies to facilitate RP in university (Blackburn & Lawrence,1995; Teodorescu,2000; Bland *et al*.,2005).

Finkelstein (1984) argued research orientation of faculty members, the highest terminal degree within a field, early publication habits, previous publication activity, communication with disciplinary colleagues, subscriptions to a large number of journals, and sufficient time allocated to research as critical variables of RP. On the other hand, Blackburn and Lawrence (1995) identified following factors including gender and race as individual factors, academic discipline, work values and preferences as career factors and institutional mission and resources, the rewards of promotion and salary and the challenges of family responsibilities as environmental factors.

Gregorutti (2010) debated that professors expressed their motivations and interests for producing research with several ideas that can be grouped under the theme of the need for publishing (Including: Intellectual Growth, Knowledge advancement and societal improvements, To refresh and enhance teaching, Professional prestige within and outside the university). Participating faculty members believed that personal and intellectual growth appeared to be related to the advancement of new knowledge. Beside this, research is increasingly seen as one of the central missions for higher education institutions (Fair weather & Beach, 2002) therefore, faculty members consider participating in the community of ideas and producing new knowledge as their organizational duty and a way of impacting society. Publishing is considered as professional prestige which can improve chance of future grant proposals. Furthermore, faculty members found research as a way to improve teaching and qualifying themselves as a teacher and adviser to students at all levels; while some faculty members believed that involving in scholarship and research leads to losing focus on students and quality teaching and even These perspectives are a probable a consequence of the emphasis new policies (from teaching to research) have on faculty members.

However, we cannot ignore the pressure for tenure and promotion as a critical key to RP. Decisions regarding tenure and promotion for individual faculty members are frequently linked to scholarly achievement. Prestige of programs and institutions often is built on the scholarly accomplishments of their faculty (Kaufman & Chevan, 2011). This is an incentive model which is in constant affirmation of the importance of research (Leslie, 2002; Bland *et al.,* 2006) and the faculty members are mostly concerned about meeting the demands of the reward system, and this, has continued to compel them to produce research.

Considering the dramatically increased focus on research, this project aimed to describe conflicts that faculty members in Iran are experiencing with the increasing pressures to create more research outputs including books, reports, projects and finally papers published in reputed journals or presented in conferences and come to an understanding of what factors contribute to increasing RP. For this purpose a five cluster variables

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Table 1. Frequency & percentage of the participants research activities

Question			Female		Male	
		Responses	N	%	Responses	N
1.No. of the Books Authored, Edited or Translated		0	107	75.9	0	107
		1-2	26	18.4	1-2	26
		3-4	6	4.3	3-4	6
		5<	2	1.4	5<	2
2. No. of Research Papers Published in Reputed Journals		0	50	35.5	0	50
		1-2	51	36.2	1-2	51
		3-4	27	19.1	3-4	27
		5-6	5	3.5	5-6	5
		7<	8	5.7	7<	8
3.No. of Research Papers Presented in Conferences		0	23	16.3	0	23
		1-2	37	26.2	1-2	37
		3-4	33	23.4	3-4	33
		5-6	22	15.6	5-6	22
		7<	26	18.4	7<	26
4. No. Research Projects Conducted by the Faculties		0	81	57.4	0	81
		1-2	51	36.2	1-2	51
		3-4	5	3.5	3-4	5
		5-6	4	2.8	5-6	4
		7<	0	0	7<	0
5. Subscription in Journals	National	Yes	46	32.6	Yes	46
		No	95	67.4	No	95
	International	Yes	18	12.8	Yes	18
		No	123	87.2	No	123
6. Membership in Professional Associations	Iran	Yes	59	41.8	Yes	59
		No	82	58.2	No	82
	Abroad	Yes	11	7.8	Yes	11
		No	130	92.2	No	130

were selected based on the previous literature in this field and considering the policies and rules in Islamic Azad University (IAU) (Table 1).

Materials and Method

This project is correlation in nature focuses to determine the presence of relation between study variables and survey method was used to collect data. To collect data required for components of RP, a Likert-type researcher developed questionnaire including 30 close-ended items in 5 dimensions (individual factors, social factors, economic factors, information systems and educational factors) and 15 demographic questions was used.

Target population

Target population of students included 4500faculty members; working in campuses of 8th district, Islamic Azad University.

Sampling method & sample size

Considering the expansion of the faculty members' population, a sample group is chosen. For selecting the participants of the study, a random sampling method was used to make sure that all faculties are present in sample group as they present in target population. In order to determine the sample size of faculty members, the Krejcie & Morgan (1970) Sample Size table was used.

Fig.1. Participants level of education

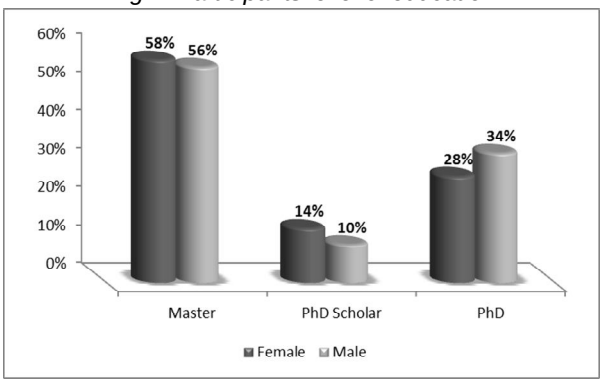


Fig. 2.Participants position

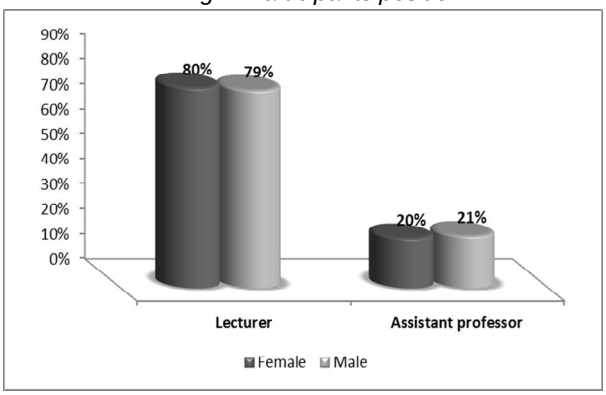


Fig.3. Participants job experience

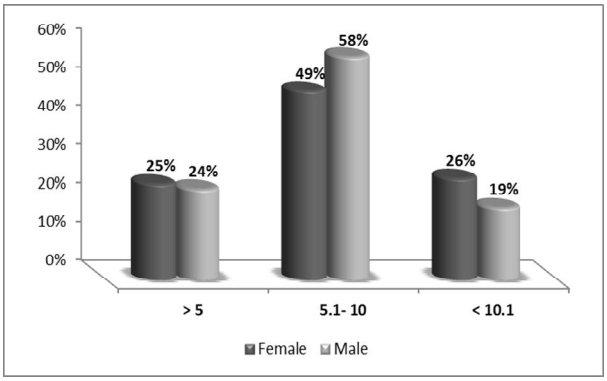
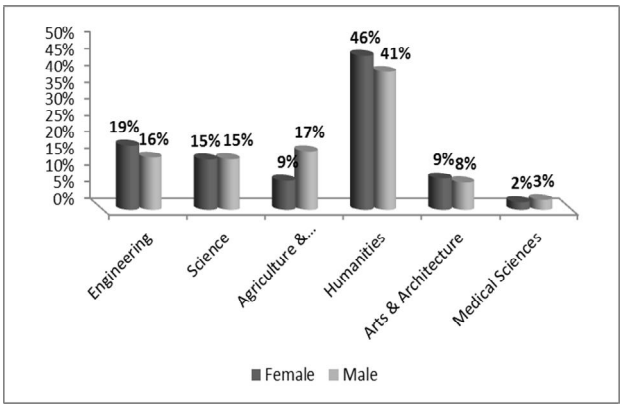


Fig.4.Participants field of expertise



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The researcher has drawn 354 faculty members from 4500 as the sample of study.

Table 2. Frequency& Percentage of the Participants Research Activities

Question			Female		Male	
		Responses	N	%	N	%
1.No. of the Books Authored, Edited or Translated		0	107	75.9	146	68.5
		1-2	26	18.4	50	23.5
		3-4	6	4.3	9	4.2
		5<	2	1.4	8	3.8
2. No. of Research Papers Published in Reputed Journals		0	50	35.5	69	32.4
		1-2	51	36.2	85	39.9
		3-4	27	19.1	29	13.6
		5-6	5	3.5	11	5.2
		7<	8	5.7	19	8.9
3.No. of Research Papers Presented in Conferences		0	23	16.3	18	8.5
		1-2	37	26.2	51	23.9
		3-4	33	23.4	66	31
		5-6	22	15.6	42	19.7
		7<	26	18.4	36	16.9
4. No. Research Projects Conducted by the Faculties		0	81	57.4	106	49.8
		1-2	51	36.2	81	38
		3-4	5	3.5	19	8.9
		5-6	4	2.8	5	2.3
		7<	0	0	2	0.9
5. Subscription in Journals	National	Yes	46	32.6	82	35.5
		No	95	67.4	131	61.5
	International	Yes	18	12.8	35	16.4
		No	123	87.2	178	83.6
6. Membership in Professional Associations	Iran	Yes	59	41.8	125	58.7
		No	82	58.2	88	41.3
	Abroad	Yes	11	7.8	25	11.7
		No	130	92.2	188	88.3

Demographic data of the respondents

From 354 faculty members 40% were female and 60% male. Among female participates 58% are Master degree holders, 14% PhD students and 28% are Ph.D. holders. Majority of male participants (56%) are Master, 10% are Ph.D. students and 34% are Ph.D. holders (Fig.1).

Fig. 2 shows that (80%) of female and 79% of male participants are ranked as lecturer. Regarding the job experience, most of the male and female participants had 5-10 years of job experience. 26% of female and 19% of male participants had more than 10 years job experience while 25% of female and 24% of male participants were fresh faculty members with less than 5 years of experience (Fig.3).

Majority of the female and male participants belong to the humanities field of study and less frequency was observed on medical science (2% female and 3% male). 19% of female and 16% of male participants were from engineering background, 15% of males and females from science and 9% of female and 17% of male participants from agriculture and environmental science. Only 9% of females and 8% of male participants belong to architecture and arts field of expertise (Fig.4).

Results

Books

About 76% of females and 68.5% of males have not authored, translated or edited any books in their field of expertise. While 18.4% of females and 23.5% of the males have published 1-2 books, 4.3% of females and 4.2% of males have 3-4 books; and only 1.4% females and 3.8% males have published more than 5 books.

Journal research papers/ articles

Regarding the journals papers, majority of the participants (36.2% of females and 39.9% of males) have published 1 or 2 papers in reputed journals. 19.1% of females and 13.6% of the males have 3-4 published papers and 3.5% of females and 5.2% males have 5-6 published papers. While only 5.7% of females and 8.9% of male participant have published more than 7 papers and about 35.5% of females 32.4% of male faculty members have not published any papers in their field of study.

Conference research papers/ articles

26.2% of females and 23.9% of the male participants presented 1-2 papers in conferences, 23.4% of females and 31% of the males presented 3-4 papers, 15.6% of females and 19.7% of males presented 5-6 papers and 18.4% of females and 16.9% of males presented more than 7 papers in conferences and seminars. While,16.3% of female and 8.5% of male participants did not present any paper.

Research projects

Majority of the participants (57.4% of females and 49.8% of male) did not conduct any research project during their duty as a faculty member. While 36.2% of females and 38% of the males conducted only 1-2 research projects, 3.5% of females and 8.9% of males completed 3-4 projects, 2.8% of females and 2.3% of the males administered 5-6 projects. Only less than 1% of the male participants have administered more than 7 research projects during their experience as a faculty member.

Journal subscription

Majority of the participants (67.4% of females and 61.5% of males) have never subscribed in national journals and 87.2% of females and 83.6% of males have not subscribed for international journals.

Professional associations' membership

In spite of IAU funding support, only 41.8% of females and 58.7% of males reported to be member of professional associations inside the country (Iran) while only 7.8% of females and 11.7% of the males reported to have membership of professional associations (Table 2).

One Sample t-Test

A one sample t-test was performed to determine the relation between individual, information, educational, social and economic factors and research productivity and incentives of faculty members.

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Table 3. Mean and Std. Error Mean of Various Aspects of Study

	Mean	Std.Dev.
Individual	4.1	.56
Information	3.9	.85
Educational	4.0	.55
Social	4.4	.46
Economic	4.5	.42

The mean of the various aspects of the study is 3.9-4.5 (5 rate Likert based Criteria). Highest mean observed for economic factors and lowest mean for information system. However, mean of the variables indicate that all participants of the study agreed that individual, information, educational, social and economic factors are influencing their research incentives and productivity (Table 3).

Individual factors

Table 4 indicate that the calculated t is more than the table value t (t=14.4, df=353, P<.05). Therefore, the alternative hypothesis is accepted at the 95% confidence level, i.e. according to the faculty members' perception individual factors (including knowledge of statistical tests and software, basic and advanced research skills, citation techniques, familiarity with scientific writing techniques, expertise of the discipline, motivation and research interest, autonomy and commitment, curiosity and creativity) have significant effect on improving their research incentives and productivity.

Table 4. One Sample t-Test of Various Aspects of Study

Factors	t	df	Sig. (2-tailed)
Individual	14.4	353	.001
Information	7.3	353	.001
Educational	14.4	353	.001
Social	34.9	353	.001
Economic	39.9	353	.001
N= 354			

Information system factors

The calculated t is more than the table value t (t=7.3, df=353, P<.05). Therefore, the alternative hypothesis is accepted at the 95% confidence level, i.e. according to the faculty members' perception information system factors (including language skills, adequate facilities, research equipment, access to research networks, printed and online resources and library resources, journal subscription, access to research centers, professional networking and introducing experienced and popular researchers) have significant effect on improving their research incentives and productivity.

Educational factors

The calculated t is more than the table value t (t=14.4, df =353, P<.05). Therefore, the alternative hypothesis is accepted at the 95% confidence level, i.e. according to the faculty members' perception educational factors (including training courses on research skills, academic writing skills, statistical skills, clear coordination between teaching and research time, organizing conferences and seminars and allocating sufficient work time for research) have significant effect on improving their research incentives and productivity.

Social factors

The calculated t is more than the table value t (t=34.9, df =353, P<.05). Therefore, the alternative hypothesis is accepted at the 95% confidence level, i.e. according to the faculty members' perception social factors (including establishing research-based climate/culture in higher education institutions, tenure promotion, social support for research, understanding values of research, respect and value to the researchers in community) have significant effect on improving their research incentives and productivity.

Economic factors

The calculated t is more than the table value t (t=39.9, df =353, P<.05). Therefore, the alternative hypothesis is accepted at the 95% confidence level, i.e. according to the faculty members' perception information system factors (including sufficient funding resources, adequate reward system for research, availability of research facilities such as libraries, journal subscription, statistical and research tools, research grants) have significant effect on improving their research incentives and productivity.

Pearson's product-moment coefficient of correlation

Pearson correlation was used to explore the association between factors influencing faculty members' research productivity. The Table 5 reflects the correlation matrix conducted on various aspect of the study from viewpoint of faculty members.

The Correlation between variables of the study indicates that there is a substantial positive correlation between individual and information systems factors(r=0.733, p<.01) and a moderate correlation between social and economic factors(r=0.567, p<.01). The Pearson correlation implies an association between the educational factors and social factors, while there is no significant correlation between other factors.

Table 5. Pearson correlation between various aspects of study

Correlations					
	Individual	Information	Educational	Social	Economic
Individual	1	.733**	.045	-.035	-.13
Information	.733**	1	.018	.007	.076
Educational	.045	.018	1	.108*	.09
Social	-.035	.007	.108*	1	.567**
**. Correlation is significant at the 0.01 level (2-tailed).					
*. Correlation is significant at the 0.05 level (2-tailed).					

Independent sample t-Test

To compare significance of the relation between male and female faculty members, participating in the study independent sample t-test was performed. The Table 6 highlights the comparison between the male and female group regarding the factors influencing their research incentives and productivity.

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Table 6. Independent Sample t-Test of various aspects of study

	Mean		t	df	Sig. (2-tailed)
Factors	Female	Male			
Individual	3.9	4.1	-2.68	352	.008
Information	3.9	3.94	-0.508	352	.612
Educational	4.1	4.01	0.633	352	.527
Social	4.5	4.3	3.92	352	.004
Economic	4.5	4.47	0.57	352	.569

The independent sample t-test provides evidence that there are statistically significant differences between males and females perception about individual and social factors influencing their research incentives and productivity. While the results of the independent sample t-test reports that there are no statistically significant differences between males and females perception about information systems, educational and economic factors influencing their research incentives and productivity.

Discussion and conclusion

This study is highly relevant to policy makers, higher education administrators, and scholars interested in higher education. Administrators can benefit from the findings in this study, which provides faculty members' perceptions and describes current status of research productivity in Islamic Azad University to identify challenges of research and developing opportunities to improve research productivity.

Compared with earlier studies in other institutions, the rate of research productivity of faculty members of Islamic Azad University is very low. Hence, concerted efforts have to be made by the policymakers, administrators and academicians concerned to make necessary improvements in the research productivity.

Findings of the study explore barriers to research productivity, which outline leading strategies for decreasing the barriers. Islamic Azad University or any higher education institutions which value research, should find the routes to success through cultivating expert and knowledgeable faculties. In doing so, they have to organize in-service training to create, recreate and update research skills of their faculties. Furthermore, time spent in research can be one of the best predictors of research productivity in Islamic Azad University Context; and to enhance research productivity among faculty members, it is strongly recommended that this Institution allocate research time in faculty members working time table. Finally, in consistent with previous literature, sufficient financial supports and adequate reward system can be a leading factor to motivate and encourage faculty members for producing more research.

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