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ANALYZING RESEARCH PRODUCTIVITY OF HUMANITIES FACULTY MEMBERS IN UNIVERSITIES OF AHVAZ, SOUTHWEST OF IRAN

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Abstract:
Introduction: University is the main axis of science production through knowledge and research. Therefore, the present study was conducted with the aim of analyzing the research productivity of humanities faculty members in universities of Ahvaz.
Methods: This study was an applied research and descriptive in nature. The statistical population consisted of all humanities faculty members of Shahid Chamran University, Payam Noor University, Science and Research University of Khuzestan and Islamic University of Ahvaz. 98 faculty member were selected as the statistical sample based on sample size determination formula and stratified random sampling method [n = 98 and N = 304]. Data were collected by a researcher-made questionnaire whose validity and reliability were calculated and verified through content validity and test re-test, respectively. The collected data were analyzed using statistical indicators, frequency, percentage, mean, standard deviation, t-test and One-way analysis of variance using SPSS21 software.
Results: The mean index of research productivity of humanities faculty members employed at universities of Ahvaz was 9.94 and the median was 7.30, indicating that the research point of 50% of the faculty members was less than 7.30 annually. There was a significant difference among different groups of faculty members in terms of academic degree and academic rank. However, there was no significant difference between them in terms of gender, the university employed at and length of service.
Conclusion: The findings of this study showed that there was no significant difference between the research productivity of faculty members in Shahid Chamran University and other universities in Ahvaz.
Keywords: *Faculty Members, Humanities, Research Productivity, Ahvaz*

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INTRODUCTION:

University is the main axis of science production through knowledge and research. [1-2] Academic research has a significant contribution to the production of knowledge as a scientific activity. In the field of science production, any new idea that can be presentable and fruitful at an international level is a research productivity. Research productivity refers to new ideas which lead to the publication of articles in reliable journals all over the world, registration of patents, or documentation after theoretical and practical studies. The University of Utah has defined research productivity as the publication and reviewing articles and writing books and monographs [3].The research productivity of faculty members can be measured by five criteria: published books, articles in journals, number of citations to their articles, honors and awards. Over the past years, a lot of efforts have been made to analyze the effects of research results. According to Carayol & Matt [2006], the evaluation of research activities can be considered as an input-output process. [4]

The inputs of this process are productive faculty members, the time allocated to the research, the number of graduate students, the number of staff members, supportive management, laboratories, libraries, computer and electronic facilities and financial resources. The outputs of research are complex and include abstract and virtual outputs such as the production of new thoughts and the awareness of modern methodologies in the form of empirical theories and findings. Visible and obvious outputs of research are published research findings in the form of research reports, articles published in reliable journals or presented at conferences and scientific circles and final products. In general, published research findings are considered as the most common tools for evaluating research productivity. Probably, in university's culture, research productivity makes a distinction between universities scientifically [5]. Productivity studies have been important in higher education before the 1970s [6]. Since then, several studies have been carried out on the impact of various factors on the productivity of universities and faculty members [3]. Research productivity of universities is reflected through articles [as a general index of measurement] published in reliable publications [7]. Martin [1996] pointed out to some indicators such as the number of publications, the quality index of the journals in which the articles have been published, reviewing and studying the articles by experts for evaluating the research productivity; however in any case, the number of scientific publications has been the most commonly used indicators and the most practical methods. Of course, individual and scientific factors and factors related to the educational group have an impact on research productivity of faculty members. [8].Woods [1990] believes that scientific research is strongly influenced by individual factors and personality traits of faculty members [9]. The study of the relationship between gender and research productivity shows that 1] The number of males' publications is more than that of females; 2] There are differences between research productivity of married and single females. 3] The gap between research productivity of males and females is not wide [10]. Various factors such as family and family affairs have an impact on the low research productivity of females. Of course, this difference is not very significant when controlling variables such as the field of study and academic rank, and it is decreasing [11]. Some studies have shown that academic rank is one of the variables influencing the research productivity of faculty members [Kyvik, 1990; Bentley, 1990; Dundar & Lewis, 1998; Perpic, [1996]. [12-14] According to Tin & Blackburn [1996], there is a significant relationship between academic rank and productivity of research. There was no difference among research productivity of faculty members, assistant professorship and associate professorships. However, this difference was significant with mastery level. [26]. Other effective variables on research productivity are the quality of higher education institutions. Carayol & Matt [2006] believe faculty members working at major universities have more research productivity than other researchers. Allison & Long [1990] have considered the relationship between university quality and university ranking with research productivity as having an impact on the university's environment. They concluded that people who had been transferred to major universities had much higher research productivity than those working at low-level universities. Offering PhD programs has also been an effective factor in enhancement of research productivity of universities. [15]. Another important factor in research productivity is the effect of studying in graduate courses on improving the research spirit of individuals. If faculty member are educated in a group in which research productivity is emphasized, this emphasis will affect their he research behavior. The prestige of a university also has an impact on research performance. Faculty members of famous and high status universities have had higher research productivity.

Carayol&Matt [2006] have examined whether education and research are complementary in the university or they are considered to be two competitive activities. Some scholars regard them as complementing each other in a way that one reinforces the other. However, some see them as

conflicting roles with different expectations and requirements [4] [Fox, 1992]. Fox believes that teaching and researching are two opposing activities. [16] In many studies, there is no relationship between teaching and researching [Ramzden & Moses, 1992 and Neuman, 1992]. According to Fox [1992], productive researchers spend less time to teach and they consider it as less important. [16] Watty, Bellamy & Morely [2008], carried out a research in Australia, England, and New Zealand and they observed that research productivity has a positive relationship with teaching.

However, this relationship will be inversed by the executive position. They also concluded that research productivity is more effective in promoting faculty members than education and executive responsibilities. [17]. Bland et al. [2005] found that there is no significant relationship between gender and research productivity of faculty members. However, organizational research policy-making has an impact on research productivity. [17]. Jisun Jung [2012] in Nigerian found that Hong Kong academics are highly internationalized in terms of research activities. Moreover, research productivity is influenced by a number of factors, including personal characteristics, workload, differences in research styles, and institutional characteristics. In addition, considerable variation exists regarding the determinants of research productivity across disciplinary categories.[5]. Christopher Okiki 2013 in Nigerian found that the research productivity of the teaching faculty members in Nigerian federal universities is high in journal publications, technical reports, conference papers, working papers, and occasional papers. Also, the mean score of information resources availability indicates that information resources are readily available to teaching faculty members in Nigerian federal universities. The barriers to research productivity by teaching faculty members in the universities include low Internet bandwidth and financial constraint. Besides, the study has shown the strengths and weaknesses of the teaching faculty members in Nigerian universities in terms of their research output [18]. Smeby & Try [2005] found that professors with PhDs had the greatest impact on research activity [19]. Wood [1990] also found that field of study can have a bearing on research productivity [9]. According to Pripic's [1996] findings, most articles related to the fields of science and technology have been published jointly; by contrast, most articles related to the humanities and social sciences have one author. [14] However, the specialized field is one of the factors that determine variabilities in the research productivity [11].The supervision of student theses is also effective in increasing research productivity. The

more qualified and empowered students are available to faculty members, the more research productivity [11, 12, 20, 21]. One of the key variables affecting research productivity is the supervision of graduate students' theses. Also, the number of supervised PhD students has a very positive correlation with research productivity [22]. Wichian, Wongwanich and Bowarnkitiwong [2009] reviewed the research performance of faculty members at the government universities in Thailand and concluded that the research per capita for each faculty member is on average 40 cases annually. [22]

In Iran, there is scarce literature on research productivity of faculty members, especially in humanities at the universities of the country. Ali Beigi [2007] examined the research productivity of faculty members at Razi University and reached the conclusion that the mean indicator of research productivity of faculty members at Razi University was 6.13. The mean was 2.80, which showed that the research of 50% of the faculty members were less than 80.2% annually. Also, the comparison of different groups showed that there is a significant difference in research productivity of faculty members in terms of academic rank [21].

Hejazi and Behrouzan [2009] are investigating the relationship between individual and organizational factors affecting the research productivity of the faculty members of Tehran University and Tarbiat Modares University. They found that age, academic rank, university at which they had studied, academic field, research goals, communication network with colleagues, Research opportunities and organizational facility resources have a significant relationship with research productivity of faculty members. [23].

As stated above, research productivity is the report and publication of research findings in national and international journals, presentation at conferences, registration of patents, the citation rates to articles and received notes, and it is measured by research indicators such as the number of published articles, the number of books, and the number of publications [11, 24]. University as every country's scientific power supply is considered the main axis of science production through research. Hence, research activities link the university with its environment. The result of this link, will be flourished all over the country. The experience of other countries shows that serious attention to research is a fundamental step in development [25]. It is said that the world's first medical university has been established in Iran. [26].

Meanwhile, university faculty members play an important role in conducting research [27]. Since the issue of research productivity of faculty members has

received less scholarly attention especially in humanities, this research was aimed at analyzing the research productivity of faculty members of humanities in the universities of Ahvaz, southwest of Iran. [Shahid Chamran, Payam Noor, Science and Research University of Khuzestan and Azad University of Ahvaz] and a comparison was made based on gender, academic degree, teaching experience, academic rank and the university employed at.

MATERIALS AND METHODS

The present research was conducted with the aim of analyzing the research productivity of faculty members of humanities in the universities of Ahvaz, southwest of Iran. This study was an applied research and descriptive in nature. The statistical population of this research was all faculty members of humanities [Shahid Chamran, Payame Noor, Science and Research University of Khuzestan, Ahvaz Azad University] [n = 98 and N = 304]. To increase the

similarity of the sample and population and to improve the precision of the sample for the parameters of the population and also involving the characteristics of population in the sample, we used stratified sampling method based on the academic rank of the humanities faculty members [instructor, assistant professor, associate professor and professor] to select the participants. One hundred subjects were selected and analyzed based on sample size determination formula and stratified random sampling method as the statistical sample. Data were collected by a researcher-made questionnaire whose validity and reliability were calculated through content validity and test re-test, respectively. The collected data were analyzed using statistical indicators, frequency, percentage, mean, standard deviation, t-test and one-way ANOVA using SPSS21 software.

Table 1: Distribution of the statistical population by the university employed at and academic rank

Academic rank / university	Instructor	Assistant Professor	Associate Professor	Professor	Total
Shahid Chamran University	50	100	10	11	171
Ahvaz Azad University	44	40	3	3	90
Science and Research University of Khuzestan	–	26	2	1	29
Payam Noor University	12	2	–	–	14
Total	106	168	15	15	304

In the present study, the following formula was used to calculate the sample size:

$$n = \frac{N * Z_{\alpha/2}^2 * \sigma^2}{\varepsilon^2 * (N - 1) + Z_{\alpha/2}^2 * \sigma^2}$$

Formula [1]: Determining the sample size [Ader & Momeni, 2005]

According to the above formula, the sample size [n=98] was determined to be approximately one hundred subjects.

Characteristics of the statistical sample: The characteristics of the sample members are presented in Table [2] based on the percentage and frequency.

Table 2: Distribution of respondents by academic rank, gender, academic degree, university employed at and teaching history

	Characteristics	Frequency	Percentage	Cumulative frequency percentage
Academic rank	Educator	35	0.35	0.35
	Assistant professor	55	0.55	0.90
	Associate professor	5	0.05	0.95
	Professor	5	0.5	100
Gender	Female	21	0.21	0.21
	Male	79	0.79	0.100
Academic degree	Master degree	35	0.35	0.35
	PhD	65	0.65	0.100
University employed at	Shahid Chamran	55	0.55	0.55
	Ahvaz Azad University	30	0.30	0.85
	Science and Research University of Khuzestan	10	0.10	0.95
	Payam Noor	5	0.5	0.100
Teaching experience	Less than 10 years	50	0.50	0.50
	10 years and more	50	0.50	0.100

In the table above, the respondents are classified in terms of academic rank, gender, academic degree, the university employed at, and teaching background in form of frequency indicators, percentage, and cumulative frequency percentage. More than half of the respondents were assistant professors, one third of them were instructors and the rest were associate professors and professors of whom .21% were females and .79% were males. In addition, one third of the respondents had a master's degree and the rest had PhDs. Finally, in the table above, half of the participants had a teaching experience less than ten years and the rest of them had ten years or more.

The research productivity of the faculty members in this research includes: obtaining the points of book writing, translation of the book, scientific-research article, scientific-extension article, participation in international conferences, participation in national and regional conferences, the research executive, membership in the editorial board of journals, supervisor [Master's and PhD degrees], and advisor [Master's and PhD degrees], honors and awards, which are calculated based on the Regulations for the Promotion of the faculty members of the Educational and Research Institutions, No. 8727.9.15.89 dated 22.2.2011 in ministry of Science, Research and Technology [Table 3].

Then the obtained point for each faculty member was divided by their years of service, and finally the research productivity of each faculty member was determined. This method was used to calculate the research performance in the researches of Johnson [1994], Katrick [2002] and Ramzden [1995].

Table 3: Research points of faculty members

Point	Performance	Point	Performance
1	membership in the editorial board of journals	Up to 15	Book writing
2.5	Supervisor [Master's degree]	Up to	Translation of the book
1	Advisor [Master's degree]	Up to 7	scientific-research article
6	Supervisor [PhD]	Up to 4	scientific-extension article
2	Advisor advisor [PhD]	1	participation in international conferences
Based on the Decision of Board of Auditors	Awards	0.5	participation in national and regional conferences
	Honors	4	Research executive

A researcher-made questionnaire was used to collect the data. Content validity was used to determine the validity of the questionnaire. The total reliability of the questionnaire was obtained through a re-test which was 83%. To analyze the data, frequency, percentage, mean, standard deviation, t-test [comparison of groups based on gender, academic degree and teaching history], one-way analysis of variance [comparison of groups based on academic rank and the university employed at] were used employing the fifteenth version of SPSS software. The significance level for all hypotheses was considered as α = 0.05.

RESULTS:
The descriptive findings of the present study showed that the mean research productivity index of humanities faculty members in the universities of Ahvaz was 94.9, and its median and mode were 7.30 and 2.60, respectively. In other words, the humanities faculty members have obtained 9.94 points annually since being attracted. The obtained median was 7.30, which indicates that the research productivity of 50% of the humanities faculty members of the target population is less than 7.30. The minimum point was zero while the maximum was 39. The first quartile was 3.50 and the third quartile was 14.90; its 90% point was 20. These numbers indicate that 25% of the faculty members received only 3.5 points. On the other hand, ten percent of them obtained more than 20.

Research productivity and gender
According to Table 4, research productivity of the male faculty members was more than that of females. However, the results of t-test show that this difference is not statistically significant.

Research productivity and academic degree
In Table 5, the mean and standard deviation of the research productivity of humanities faculty members in universities of Ahvaz is presented in relation to academic degree.

Based on the table above, the research productivity of faculty members with a PhD degree is more than those having a master's degree. T-test was used to measure the difference between two educational levels. The results of the test show that this difference is statistically significant. Mann Whitney U test was used to observe precaution measures due to the unequal groups [sig = 0.003 and U = 730]. This indicated a significant difference in the faculty members with a PhD degree than a master's degree. That means that faculty members with a PhD degree had higher research productivity than faculty members with a master's degree.

Research productivity and academic rank
In Table 6, the mean and standard deviation of the research productivity of humanities faculty members in the universities of Ahvaz are presented in relation to academic rank.

Table 4: Comparison of research productivity of faculty members in relation to gender

Significance level	t	Female		Male		Variable
		Standard deviation	Mean	Standard deviation	Mean	
0..351	-0..94	8..71	9.51	9.74	11.57	Research productivity

Table 5: Comparison of research productivity of faculty members in relation to academic degree

Significance level	T	PhD		Master's degree		Variable
		Standard deviation	Mean	Standard deviation	Mean	
0.001	-3.53	10.06	12.13	3.86	5.88	Research productivity

Table 6: The mean and standard deviation of the research productivity of faculty members in relation to academic rank

Standard deviation	Mean	Percentage	Frequency	Academic rank
3.86	5.88	0.35	35	Educator
9.67	12.56	0.55	55	Assistant professor
16.27	10.42	0.5	5	Associate professor
8.81	9.18	0.5	5	Professor

Table 7: Comparison of research productivity of faculty members in relation to academic rank

Significance level	F	Mean squares	Degree of freedom	Sum of squares	variable
0.006	4.43	319.598	3	958.795	Intergroup
		72.173	96	6927.612	In-group
			99	7887.67	Total

Based on table 6, the research productivity of faculty members who are assistant professors is more than that of instructors, associate professors and professors. Based on this, the lowest research productivity was related to instructors while the highest research productivity was related to assistant professors. ANOVA was used to measure the difference between them.

According to Table [7], there is a significant difference between the research productivity of faculty members and their academic degrees. Tukey's test showed that this difference is between instructors and assistant professors.

Research productivity place of place of employment
In Table 8, the mean and standard deviation of the research productivity of humanities faculty members in the universities of Ahvaz are presented in terms of university employed at.

Based on the table 8, the research productivity of the faculty members is different in the university. Accordingly, the lowest productivity is related to Payam Noor University while the highest productivity is related to Shahid Chamran University. ANOVA was used to measure the difference between them.

Table 8: The mean and standard deviation of the research productivity in relation to university employed at

Standard deviation	Mean	Percentage	Frequency	University
9.44	11.15	0.55	55	Shahid Chamran
4.09	3.08	0.5	5	Payam Noor
11.27	10.29	0.10	10	Science and Research University of Khuzestan
7.20	8.76	0.30	30	Ahvaz Azad

Table 9: Comparison of research productivity of faculty members in relation to university employed at

Significance level	F	Mean squares	Degree of freedom	Sum of squares	variable
0.213	1.526	119.647	3	358.940	Inter group
		78.422	96	7528.466	In-group
			99	7887.406	total

According to Table [9], there was no significant difference between the research productivity of faculty members in the studied university.

Research productivity and teaching experience
Table 10 shows the mean and standard deviation of the research productivity of humanities faculty members in the universities of Ahvaz in relation to service years.

According to Table 10, research productivity of faculty members with an employment history of more than 10 years is more than that of faculty members with less than 10 years of teaching experience. However, t-test showed that this difference was not statistically significant.

Stepwise regression analysis was used to determine the predictor variables of the research productivity of the faculty members [Table 11].

Table 10: Comparison of research productivity of faculty members in relation to teaching years

Significance level	T	10 years and more		Less than 10 years		Variable
		Standard deviation	Mean	Standard deviation	Mean	
0.268	-1.11	9.80	10.96	7.97	8.97	Research productivity

Table 11: Multiple correlation coefficient and coefficient of determination's predictor variables of the research productivity of faculty members based on stepwise regression analysis

Significant level	T	Beta value	Amount of B	R2	R	Predictor variable
0.769	0.294	0.030	0.644	0.009	0.094	Gender
0.005	2.877	0.483	8.988	0.118	0.343	Academic degree
0.232	-1.204	-0.251	-2.977	0.124	0.353	Academic rank
0.337	-0.965	-0.097	-0.639	0.130	0.361	University employed at
0.411	0.826	0.113	0.134	0.136	0.369	Teaching years

The multiple correlation coefficient [R] in this analysis is 0.369 and the coefficient of determination [R2] is 0.136, which showed five variables, namely academic degree, academic rank, the university employed at and teaching experience explained 136% of the research productivity changes. Among the 15 predictor variables, academic degree with the highest beta has more predictive power than other variables.

DISCUSSION AND CONCLUSION:
The findings of this study showed that on average, each humanities faculty member employed at the universities of Ahvaz has about 10 research points annually through book writing, book translation, scientific-research article writing, scientific-extension article writing, participation in international conferences, participation in national and regional conferences, being research executive, membership in the editorial board of journals, being supervisor [of Master's degree], being advisor [of Master's degree], being supervisor [of PhD], being advisor [of PhD], honors and awards which are obtained based on the regulations of the Ministry of Science, Research and Technology [Table 3]. Also, the results showed that the research productivity of 50% of the humanities faculty members of the target population is about 7. In this study, there was a significant difference between academic degree and academic rank of faculty members. The results of research by Tin & Blackburn [27], Perpic [14], Smeby & Try [19], Carayol & Matt [4], Ali Beigi [21] and Hejazi & Behrovan [23] confirm this research in this field. However, there was no significant difference between the three variables of gender, the university employed at and teaching experience, and research productivity. These results are consistent with those of Ali Beigi [21], Hejazi and Behrouz [23]. but not supported by the results of Woods [9], Zeinab [11] and Bland et al. [17].
One of the notable findings of this research is lack of any significant difference between research productivity of faculty members in Shahid Chamran University [which is a prestigious and type-1 university in the ranking of the Ministry of Science, Research and Technology] and other studied universities [Payam Noor, Science and Research University of Khuzestan and Ahvaz Azad university]. Ellison and Long [1990] argue that the research productivity of faculty members in large universities is higher than that of lower-level universities. [15] This could be explained by the scientific competition between universities, and in particular, the financial support of Azad University provided for enhancement of research performance of faculty members and the existence of postgraduate programs offered in these universities, making this difference

negligible and statistically insignificant. To accurately calculate the research productivity of faculty members calls for referring to the faculty member's [documented] research file. However, since there was no such files [or incomplete and not updated in limited cases], the researcher inevitably compiled interviews and questionnaires which might not be correct. Therefore, it is suggested that reliable data be obtained through the faculty members' obligation to document their research performance or to take responsibility of a field in the university to document the research productivity of the faculty members.

Ethical considerations
Ethical issues have been completely observed by the authors.

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