PREDICTING THE UNIVERSITY TEACHERS' PERFORMANCE: A SURVEY OF GOMAL UNIVERSITY (A PSO), DIK

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ABSTRACT

The performance of teachers is commonly measured by the colleagues, students and administrative heads through a questionnaire containing questions about the criteria for evaluation: efficiency, effectiveness, responsiveness and innovation. The overall score is therefore predicted by the data on four factor-criteria. It is however argued that the demographic characteristics of the evaluators also play significant role in defining the overall scores of evaluation. This paper applies regression tools to predict the overall score of teachers performance, first with predictors (criteria) and then with the demographic variables. As the results show that four-factor criteria is making 17% (R^2=0.168) change in the OS while demographics poor predictors of OS as their R^2 = 0.015 meaning than only 2% of OS has been explained.

Keywords: PSOs, Uni-Teachers' Performance Evaluation, Demographic-attributes

INTRODUCITON

Research tells that it is the responsibility of the senior management to ensure that a system exists that will produce the indicators for strategic, continuous improvement and change-management performance. They also need to sanction the resources required to establish a management information system (MIS) that will collect and disseminate performance related information (Joyce & Galhoun, 2010). Since, control and evaluation are major secrets of an organization's survival therefore, universities, as research and educational organizations, need to be evaluated in order to survive (Ghurchian et al., 2010).

Performance appraisals occur in applied, social and political contexts (Bretz et al., 1992). Environmental developments, higher social expectations and development of information technology make constant monitoring of productivity and efficiency of universities a necessity while development of unattended higher education has intensified competition among universities. Experts have provided various indicators for evaluating performance of universities (Amin & Khan, 2009). All performance evaluation indicators can be divided into three categories of output, process, and structure (Ishaq et al., 2009).

It is however, notable that in this technological and electronic age in most of the developing countries of the world such as India, BanglaDesh and Sri Lanka, the literacy rate is below average as compared to advanced states. Pakistan is also a developing country and it is very difficult for her to improve its literacy rate and quality particularly, at university level (Malik et al., 2003; Nawaz & Kundi, 2010). The only thing one can require of a teacher is the performance of duties, such as fairness in the dealing with of students, makes effort in the preparation and management of instruction, and successful learning by students that do the prescribed activities. Only excellent teachers can communicate their ideas both in written and oral effectively (Donaldson, 2011).

Effective performance management of professionals in academic institutions has particular significance; it determines the institution's success or failure. Performance management is a joint process that involves both the supervisor and the employee, who identify common goals, which associate to the higher objectives of the institution. Talking about the nature of the performance appraisal, Wilson (2005) says it is neither a technique nor a single step, it can be considered a continues process that includes employee motivation to perform well, knowledge of employees about what their managers expect of them and evaluation of their performance aimed at identifying areas where the improvements are needed (Anjum et al., 2011).

RESEARCH DESIGN

Survey approach was used by selecting a sample of students, colleagues and administrators who then filled a structured questionnaire that was extracted from the literature. Target population consists of all the University teachers in Public sector. The sample was chosen from Gomal University, DIK using 'stratified sampling.' Data was inserted into SPSS for creating a database (data-matrix) for further statistical analysis. The procedures of Regression analysis were used to measure the prediction power of the predictors (criteria for evaluation) and the demographic explanations.

LITERATURE REVIEW

University Teachers' Performance Evaluation

The changing environment of higher education institutions is characterized by

competitive global educational market; the importance of staff development has been recognized as essential to support new approaches to learning and teaching and the changing needs of institutions (Rindermann et al., 2007). In this scenario, one of the obligations of university leadership is to develop its staff professionally so as to support learning and improve student performance. This improvement in the professional competencies of the university academic staff helps to develop knowledge and skills of the staff in support of current role, or prepare the staff for contemporary and futuristic roles (Anyamele, 2007: Joyce & Galhoun, 2010).

Performance management practice of human resource management provides the sound basis of evaluating and developing employee performance in order to get enhanced organizational success. Similar to any organization, universities or higher education institutions evaluates its employees/teachers performance for effective human resource management (Usmani, 2008). Although, both teaching and non-teaching (administrative) staff in universities play an important role in escalating institution's performance, yet teachers are considered to be imperative human resource of higher education institutions. Performance evaluation of teachers in terms of their teaching and research outcome is the primary area of concern for any university and highly unaddressed issue in case of universities in developing countries like Pakistan (Aslam, 2011).

In every performance evaluation approach, there are some issues critical for reliability and success that need to be addressed (Anninos, 2007). These issues are relevant to the actor that is responsible for the evaluation, the object of evaluation, the orientation and mission of each institution and whether these factors are taken into consideration, the reason for evaluation, the frequency of evaluation and the methodology followed, the valves of scientific validity and the dynamic nature of the evaluation system so that it keeps pace with changes and developments regarding higher education (Ghurchian et al., 2010).

Evey organization (small or big) requires maintaining performance of its employees in order to get their best. Similarly, in university administration, higher management consistently searches different ways of evaluation and development for their faculty members.

This evaluation process provides basis for promotion, tenure and remuneration of faculty members (Reddy, 2006). The concept like 'Teachers are born and not made' or 'Teacher is only effective if he can deliver lecture' are no longer exist. Today teacher is involved in so many activities like planning updating course, developing learning environment, facilitating discussion, creating interactive environment where students can suggest solutions, preparation of tests, assignment setting, providing feedback and proper counseling of students (Aslam, 2011).

Indicators as Predictors

Effectiveness

Organizational effectiveness is the notion of how effectual an organization is in accomplishing the results the organization aims to generate. It plays an important role in accelerating organizational development. It is the net satisfaction of all constituents in the process of gathering and transforming inputs into output in an efficient manner. Organizational effectiveness is defined as the extent to which an organization, by the use of certain resources, fulfils its objectives without depleting its resources and without placing undue strain on its members and/or society. It is the maximum combined utility of the primary constituents (Carin & Good, 2004).

Efficiency

Improved efficiency is now the overriding aim of public sector reforms in most African countries. It is thought that the State's capability – its ability to promote and undertake collective action efficiently – is overextended. Therefore, reductions and a refocusing of the State's activities are needed to improve macroeconomic stability, as well as the implementation of stronger incentives for performance (Geuna & Martin, 2003). Furthermore, increased competition in service provision, both with the private sector and in the public sector itself, is required in order to raise efficiency (Anninos, 2007). Consequently, governments should concentrate their efforts less on direct intervention and more on enabling others to be productive by providing "core" functions such as safeguarding law and order; protecting property rights; managing the macro-economy to promote and regulate the market; providing basic social services and infrastructure; and protecting the vulnerable and destitute (Li, 2011).

Responsiveness

Since the principle of 'responsiveness' is inherent in the concept of customer service, it is not surprising that it is captured in the indicators for the customer service excellence tool. It is surely relevant to government policy making too. Yet the existing tools focus on internal processes, in so doing downplaying the interface between government actors and civil society (UNDP, 2009). There is a strong case for including additional measures to reflect this principle. The principle of 'transparency' is relevant to the government budget and to certain human resource management processes (e.g. recruitment and selection, performance appraisal, discipline.) And it does seem to be captured reasonably well by the better PFM and public HRM tools (Armstrong & Unger, 2009).

Innovation

Bureaucratic organizations aim to follow the regulated procedures and they involve the characteristics such as control, centralization and formalization. In early study, bureaucratic organization was thought as low innovative capacity. Many researchers confirmed that bureaucratic organization would negate organizational innovation (Raub, 2008). The public universities in Taiwan are restricted by personnel matters, budgets, rules and systems of the government, and they tend to be inflexible and are considered as bureaucratic organizations. Innovation and research are now increasingly international endeavors. Most innovations originate from multiple countries, drawing in components or technologies developed in multiple locations with the high-growth economies playing an increasingly important part (BIS, 2011).

Demographic Predictors

Several researchers have identified the impacts of the personal and social attributes of teachers, students and administrators which affect their attitudes towards each other. These demographic implications are more severe and wider as compared to the developed and advanced countries (Woolfolk et al., 2007). A research tells that these are not only the personal attributes of the teachers, administrators, and students, rather contextual factors also affect the evaluation process of the evaluators. For example, beliefs of teachers are influenced by contextual variables of the immediate

school context and classroom (Arric et al, 2011)

Theoretical Framework

Table 1 List of the Working Concepts (Indicators)

	Variables	**Definitions**
1	Effectiveness	Effectiveness refers to the degree to which an organization achieves its stated objectives.
2	Efficiency	The ability to undertake an activity at the minimum cost possible.
3	Responsiveness	It is the inclination and capacity of public servants, to respond to external needs and demands.
4	Innovation	It is of vital importance to measure an organization's ability of adopting new changes in its structures, methods, criteria of assessment, etc.
5	Overall Score	Summation of answers from one key question on each variable.

Table 2 List of the Working Concepts (Demographics)

	Variables	**Attributes**
1	Respondent-type	Teacher, Students & Administrators
2	Gender	Male and Female
3	Qualification	Graduation, Masters, MPhil/PhD
4	Domicile	Local, Non-local

Figure 1 Theoretical Models of the Paper

FINDINGS OF THE STUDY

Descriptive Data

Table 3 Demographic Classifications

	Gender		Domicile		Qualification		
Respondent Type	ML	FM	LC	NL	GR	MS	HE
Student	70	62	57	75	123	9	0
Teacher	87	50	55	82	0	103	34
Administrator	45	0	33	12	31	14	0
	202	112	145	169	154	126	34

Testing of Hypothesis

H_1 *Predictors are Associated with the Criterion Variable*

Table 4 Correlations between the Research Variables

		EFT	EFF	RES	INN	OS
Effectiveness	r	1	.276**	.270**	.318**	**.312****
	p		.000	.000	.000	**.000**
	N	314	314	314	314	314
Efficiency	r	.276**	1	.319**	.206**	**.341****
	p	.000		.000	.000	**.000**
	N	314	314	314	314	314
Responsiveness	r	.270**	.319**	1	.123*	.090
	p	.000	.000		.030	.112
	N	314	314	314	314	314
Innovativeness	r	.318**	.206**	.123*	1	**.203****
	p	.000	.000	.030		**.000**
	N	314	314	314	314	314
Overall Score	r	**.312****	**.341****	.090	**.203****	1
	p	**.000**	**.000**	.112	**.000**	
	N	314	314	314	314	314
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Analysis

The above table (5.5) shows that there is highly significant relationship between THREE predictors (Effectiveness (r=0.312 & *p*-value=0.000), Efficiency (r=0.341 & *p*-value=0.000), and Innovation (r=0.203 & p-value=0.000)) and the overall score (OS) however; there is Insignificant association between OS and Responsiveness (r=0.090 & p-value=0.112). Since three of the predictors are significantly associated with the dependent variable therefore hypothesis is accepted as ¾ true.

a. Explaining OS through Predictors

H_2 *OS is explained by the Predictors*

Table 5 Summary of the Regression (stepwise-regression) Models

R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
.341[a]	.116	.113	.38581	41.011	.000[a]
.410[b]	.168	.162	.37499	31.339	.000[b]

Table 5a Coefficients of Regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.191	.206		10.622	.000
	EFF	.357	.056	.341	6.404	.000
2	(Constant)	1.558	.247		6.304	.000
	EFF	.289	.056	.276	5.123	.000
	EFT	.242	.055	.236	4.389	.000

Table 5b Excluded Variables

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	EFT	.236[a]	4.389	.000	.242	.924
	RES	-.021[a]	-.373	.709	-.021	.898
	INN	.139[a]	2.577	.010	.145	.958
2	RES	-.072[b]	-1.288	.199	-.073	.862
	INN	.081[b]	1.470	.143	.083	.884

a. Predictors in the Model: (Constant), EFF
b. Predictors in the Model: (Constant), EFF, EFT
c. Dependent Variable: OS

Analysis

Two models have appeared with R2 of 0.168 meaning that 17% of variation in the dependent variable is explained by two variables. Thus, Efficiency and Effectiveness have emerged as the critical determinants of the overall score while Responsiveness and Innovation have no role in the definition of OS. The impact of predictors is therefore 50% as two out of four variables are found significant.

b. Predicting OS through Demographics

H_3 *Demographics determine the OS*

Table 6 Models' Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
.123[a]	.015	.012	.40727	4.793	.029[a]

Table 6a Coefficients of Regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.564	.035		100.551	.000
	Respondent Type	-.102	.047	-.123	-2.189	.029

Table 5.6b Excluded Variables

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	Gender	-.095[a]	-1.663	.097	-.094	.960
	Qualification	-.051[a]	-.598	.550	-.034	.435
	Domicile	-.010[a]	-.179	.858	-.010	.999

a. Predictors in the Model: (Constant), Respondent Type
b. Dependent Variable: OS

Analysis

The demographic attributes were first converted into 'Dummy-variables' and then stepwise regression was run to find out the cause-n-effect relationship between the demographic characteristics of the respondents and their overall score of performance evaluation. Only one model emerged with R2 of 0.015 meaning that only 2% change in the criterion variable is explained by one of the variables and that is RTP (Respondent-type). Gender, qualification and Domicile have been excluded from the model. Thus the hypothesis is not substantiated.

CONCLUSIONS

Table 7 Summary of the Findings

	Test	Results	Relation/Effect
H_1	Corr.	Three of the Predators are highly correlated with criterion (EFT, r=.312, *p*=0.000) (EFF, r=341, *p*=0.00) & (INN, r=.203, p=0.000)	¾ = 75%
H_2	swReg	Only TWO of the Factors emerge as significant (p-values EFF=0.000 & EFT=0.000) giving R^2 of 0.168 or 19% change in the dependent variable. However, RES (*p-value*=0.852) & INN (*p-value*=0.884) have insignificant role in the regression process.	2/4 = 50%
H_3	swReg	The stepwise regression of the Dummy variables (Demographics) on overall score shows that R2 of 0.015 is explained by only RTP (p-value=0.029). The GDR, QUA and DOM appear irrelevant.	¼ = 25%

The above table shows that:

1. There is high correlation between the independent and dependent variable of overall score.
2. In the regression on the impacts of predictors on OS, two factors (efficiency and effectiveness) emerge as significant. However, responsiveness and innovation have no role in explaining the variation in the dependent variable.
3. The regression of demographics (dummies) on the OS tells that only 'Respondent-type' is significant however, rest of the variables like GDR, QUA and DOM are not bringing change in the criterion variable.

REFERENCES

Amin, H. & Khan, AR. (2009). Acquiring Knowledge for Evaluation of Teachers' Performance in Higher Education – using a Questionnaire. *International Journal of Computer Science and Information Security (IJCSIS)*, Vol. 2, No. 1.

Anjum, A., Yasmeen, K., & Khan, B. (2011). Performance Appraisal Systems In Public Sector Universities Of Pakistan. *International Journal of Human Resource Studies*, 2011, Vol. 1, No. 1: 41-51. At www.macrothink.org/ijhrs

Anninos, LN. (2007). University Performance Evaluation Approaches: The Case of Ranking Systems. Ph.D Candidate

in Business Administration. Department of Business Administration, University of Piraeus, Hellas. Holder of Scholarship, Onassis Foundation.

Anyamele, S. C. (2007). Managing Professional Competencies of Teaching Staff in the University: Views of Finnish University Leaders. *The Academic Leadership*, The Online Jourenal, 5(1).

Armstrong, M. & Baron, A. (2005). *Managing Performance: Performance management in action*. CIPD, London.

Arric, L., Young, K., Harris, S., & Farrow, V. (2011). *An Analysis of Stress Levels of Female Graduate Students in an Online Program. Advancing Women in Leadership*, Vol. 31, pp. 144-152. Retrieved on March 12, 2011, from http://advancingwomen.com/awl/awl_wordpress/.

Aslam, HD. (2011). Performance evaluation of teachers in universities: contemporary issues and challenges in Pakistan. Proceedings of the 2011 International Conference on Teaching, Learning and Change. (c) International Association for Teaching and Learning (IATEL): 339-362Arric et al, 2011

Aslam, HD. (2011). Performance evaluation of teachers in universities: contemporary issues and challenges in Pakistan. Proceedings of the 2011 *International Conference on Teaching, Learning and Change*. (c) International Association for Teaching and Learning (IATEL): 339-362

BIS (2011). Innovation and Research Strategy for Growth. Presented to Parliament by the Secretary of State for 'Business, Innovation and Skills' by Command of Her Majesty December 2011. Printed on behalf of the Controller of Her Majesty's Stationery Office. Available at: http://www.bis.gov.uk/innovatingforgrowth. ISBN: 9780101823920.

Bretz, Robert D. Jr.; Milkovich, George T. ; and Read, Walter, (1992) "The Current State of Performance Appraisal Research and Practice: Concerns, Directions, and Implications" (1992). *CAHRS Working Paper Series.* Paper 298. http://digitalcommons.ilr.cornell.edu/cahrswp/298

Carin, B. & Good, DA. (2004) Evaluating efficiency and effectiveness in public sector delivery. Prepared as part of the CEPRA project on "Sector and Regional Specifics of Reformation of Budgetary Institutions" for the Kaliningrad Workshop. July 24-25, 2004

Donaldson, G. (2011) Teaching Scotland's future: Report of review of teacher education in Scotland, December 2010. Produced for the Scottish Government by APS Group Scotland. Published by the Scottish Government, January 2011.

Geuna, A. & Martin, B.R. (2003). University Research evaluation and funding: An International Comparison, Minerva (41), 277-304.

Ghurchian, NG., Jafari, P. & Rahgozar, H. (2010). Designing a Model for Performance Evaluation in Iranian Universities Based on the Organizational Excellence Indicators. *European Journal of Social Sciences*, (17)3:434-441.

Ishaq, HM., Iqbal, MZ., & Zaheer, A. (2009). Effectiveness of Performance Appraisal: Its Outcomes and Detriments in

Pakistani Organizations. *European Journal of Social Sciences* – Volume 10, Number 3 (2009)479-485.

Joyce, B., & Calhoun, E. (2010). Models of professional development: A celebration of educators. Thousand Oaks, CA: Corwin Press.

Li, Wei. (2011). Performance Evaluation for Private Colleges and Universities Based on the Balanced Scorecard. IEEE MSIE 2011 603-606.

Malik, N. H., Zaka., Hassan, Y. & Sultana, R. (2003) Identification of University Teachers Competencies as Perceived by the Students. *International Journal of Agriculture & Biology*, 5(4):521-522. Retrieved on November 12, 2011, from http://www.ijab.org.

Nawaz, A. & Kundi, G. M. (2010c). Digital literacy: An analysis of the contemporary paradigms. *Journal of Science and Technology Education Research* (JSTER), 1(2):19-29.

Raub S (2008). Does bureaucracy kill individual initiative? The impact of structure on organizational citizenship behavior in the hospitality industry. *Int. J. Hosp. Manage*, 27: 179-186.

Reddy, Y.K. (2006) University Administration, 1st. edition, Omega Publications, New Dehli.

Rindermann, H., Kohler, J. & Meisenberg, G. (2007) Quality of Instruction Improved by Evaluation and Consultation of Instructors. *International Journal for Academic Development*, Vol. 12, No. 2, November 2007, pp. 73–85

UNDP (2009) Users' Guide For Measuring public administration performance. Copyright © 2009 by UNDP. All rights reserved. For information regarding the appropriate use of this document, please contact the UNDP Oslo Governance Centre.

Usmani, A.B. (2008) Meta evaluation of a teachers' evaluation programme using CIPP model. *2nd International Conference on Assessing Quality in Higher Education*, 1st – 3rd December, 2008, Lahore – Pakistan.

Wilson, J. P. (2005) Human Resource Development, 2nd edition, Kogan Page, London.

Woolfolk, A., Davis, H., & Pape, S. (2007). Teachers' knowledge, beliefs, and thinking. In P. A. Alexander & P. H, Winne (Eds.), Handbook of educational psychology (2nd ed, pp. 715-737.). Mahwah, NJ: Lawrence Erlbaum.