Evaluating the quality of professors' teaching process based on students' view and professors of Persian Gulf University

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Abstract

Evaluation forms a major criterion in universities and higher educational institutes, for training expert human resources and producing knowledge and technology. Also important is evaluation of the teaching quality, for the accreditation and efficacy of a university and its academic faculties. This paper is a survey of the evaluation of teaching quality done based on surveying and comparing students' and professors' views among the business management, industrial management, and accounting departments in Persian Gulf University (PGU), Bushehr. A research-structured questionnaire was applied to measure and evaluate the teaching quality. The statistical population comprised of 1280 PGU students, including 28 faculty members and 276 persons randomly selected based on stratification sampling method. Content analysis was used for validity while Chronbach's Alpha was used for reliability (α = 0.92). Findings based on *T*-test, ANOVA and other tests showed several effective factors impacting the attitude and evaluation of the teaching process quality.

Keywords: Teaching process, quality evaluation, Persian Gulf University.

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1. Introduction

The basic mission and function of a university is education and training of expert human resources needed for society and for creating the appropriate conditions for sustainable development. Academic faculties are a set of expert human resources who are responsible for education and development of knowledge in universities and higher educational institutes. Quality and knowledge development are dependent on the way of their performance; therefore, inquiry and survey about the effectiveness and quality of academic faculties and their performance in education is one of the important issues by which a suitable feedback prepares for educational issues analysing and basic decision-making for strategic planning by higher education practitioners. On the other hand, academic faculties can be aware of their educational performance and try to amend their teaching methods and, consequently, increase their teaching quality.

Students' evaluation about a professor performance and effectiveness of teaching is the most common ways of evaluation of a professor's educational performance, promoting and improving their teaching level (Spoorn, 2007). Studies have shown that evaluation by students has been a valid, reliable, simple and appropriate way for evaluating some teaching dimensions. The efficacy of this, however, depends on various factors, including the device used and the fair report from students about the teaching quality (Abdollahi, 1996). Today, students are identified as clients in professors' teaching process in US colleges and universities. A study performed on 600 colleges during 1973–1993 showed that the application level of professor's evaluation done by students has increased from 20% to 86% (Emery, 2007). The main aim of professors' performance evaluation by students refers to the feedback about professors' educational performance effectiveness (Sproul, 2000). Academic faculties and responsible universities have found that professors' performance evaluated by students would be vital for continuous improvement for a successful learning-teaching process (Harington, 2005).

2. Literature Review

Both researchers and various international universities have claimed some principles for teaching evaluation that are entirely congruent with each other, including Kansas State University (2005); these principles are as follows:

– Teaching is the main task of academic faculties and needs to be paid attention for growth;
– Teaching is a process needed for improvement and development;
– Evaluation of teaching is a means for improving the teaching and it is not merely a final aim.

Some specialised works that have considered a number of aspects of academic faculties' teaching evaluation include Boyd's article (1989) entitled, 'improving academic faculties' teaching evaluation' in which the academic faculties were excluded from identifying the participative evaluation criteria. While other professions (physicians, lawyers and engineers) have some criteria for entry, membership and supervision of them, academic faculties do not have this privilege.

Marsh and Billy (1993) found that students' evaluation questionnaires are multi-dimensional, trustable and reliable measures of a professor's performance and is managerially good device for personnel decision-making and ultimately, a good means for research. Kansas State University (2005) concluded that student evaluation should not be applied as the only tool for teaching evaluation. Teaching evaluation is merely a tool for teaching improvement and not a final aim, and its conclusions should be delivered to the academic faculties for use.

A total of 68 professors believed that student evaluation should be considered as a part of evaluation. Student evaluation must be applied for teaching improvement as it helps the teaching process to improve. Dunkin and Barens (1986) believed that perceptions and individual judgment are affected by personality attributes and general contextual traits, and there is no reason to expect that students and pupils are beyond these types of affects during evaluation.

Also, Pintrich and Shunk (1996) believed that students' effective teaching evaluation in questionnaires would be dependent on their motivation. Warkentin (1996) believed that these performances would depend on students' study habits. Kohlen (1973) showed that the way of thinking and students' attitude about their professors would be shaped after the first two or three sessions and then it would seldom change. He evaluated a correlation coefficient of about +0.85 between scores through two evaluation stages (one after the second session and the other at the end of semester).

Cottrel (2006) stated that the most significant step in evaluation design would be the expression of students' attitudes and expectations, which in turn would be the results or aims of teaching. Identifying these expectations is a crucial point in any professor's activities. Studies by Yining *et al.* (2003) in Ohio University about students' evaluation of teaching effectiveness show that improvement in professors' teaching method is the most attractive result of an evaluation system for both freshmen and senior students, while the second strong result of evaluation is the achievement in lessons and their curricular courses.

3. Research Questions

3.1. What criteria must an appropriate system of academic faculties' performance evaluation conclude?

3.2. What is the appropriate way of academic faculties' performance evaluation in the university setting?

3.3. To what extent does the quality evaluation of professors' teaching process by students affect and promote effective teaching quality?

4. Methodology

This is a descriptive-survey research and its statistical population consisted of students and professors of PGU, among which 276 students were randomly selected based on stratification sampling according to Cochran's formula along with 28 academic faculties. A research-structured questionnaire was used, whose content validity and reliability ($\alpha = 0.920$) were affirmed.

The gathered data were analysed using descriptive and inferential indexes, including frequency, mean, SD, regression, factor analysis and so on.

5. Data Analysis

5.1. Factor Analysis of Variables

A total of nine variables were included in factor analysis, whose KMO was 0.871, showing the appropriateness of variables for factor analysis. The variables were divided into two classes whereby the first factor could explain 52.24% and the second 11.97% of variances (see Tables 1 and 2).

Table 1. The special value, the presence of variance and cumulative factors

Factor	Spec. value	Variance present	Cumulative variance present
First	4.702	52.24	52.241
Second	1.077	11.966	64.207

Table 2. Factors and factor coefficient of variables in Varimax cycle

Variable	First factor (attitude)	Second factor (attitude)
Evaluation of teaching quality		0.902
Satisfaction of evaluation results		0.866
Keeping educational regulations	0.817	
Teaching style	0.796	
Professors and student exchange	0.724	
Being aware of evaluation goals	0.706	
Total satisfaction of professors	0.617	
Research activity	0.504	

6. Analysis

6.1. Multi-variable Regression

In order to survey the common and simultaneous effect of independent variables on dependent ones, the following variables were concluded in regression:

Dependent variable: attitude towards evaluation of teaching quality;

Independent variables: satisfaction of evaluation results, keeping educational regulations, teaching style, applying the educational technology, professor and student exchange, being aware of evaluation goals, total satisfaction of professor and research activity.

Since it is proposed that all the above-mentioned variables have a causative effect on attitude towards the quality evaluation of teaching, the variables were included in step-wise regression. Finally, three variables remained, whose results are shown in Tables 3 and 4.

Table 3. The level of multi-variable regression

Stage	Entered variable	β	SE/B	Corrected β	t	Sig.	Partial
First	Constant	6.840	0.891	0.705	7.681	0.000	0.705
	Evaluation results	1.223	0.071		17.297	0.000	
Second	Constant	4.384	1.036	0.614	4.232	0.000	
	Evaluation results	1.065	0.078		13.667	0.000	0.619
	Teaching style	0.222	0.051	0.194	4.314	0.000	
Third	Constant	4.720	1.042		4.528	0.000	0.266
Evaluation results	1.094	0.079	0.631	13.902	0.000		
Teaching style	0.307	0.065	0.268	4.716	0.000	0.263	
Educational regulations	−0.147	0.069	−0.118	−2.111	0.000	−0.0121	

Table 4. Correlation of multi-variable regression

Stage	Entered variable	R	R^2	Corrected R^2	SE	Added to R^2	f	Sig.
First	Evaluation results	0.705	0.498	0.496	3.243	0.498	299.202	0.000
Second	Evaluation results Teaching style	0.726	0.527	0.524	3.152	0.029	18.615	0.000
Third	Evaluation results Teaching style Educational regulations	0.731	0.534	0.529	3.134	0.007	4.457	0.036

As illustrated in the table, the correlation coefficient of multiple is 0.705 and 0.726, and 0.726 in models one, two and three, respectively, meaning that there is a correlation between these three independent variables with attitude towards the quality evaluation of teaching (0.71, 0.72 and 0.73). The value of R^2 shows that variance of attitude towards evaluation quality of teaching is estimated by three existing variables: satisfaction about evaluation results, professors' teaching style and keeping educational regulations in the group. On the other hand, these three variables explain 53% of attitude variance towards the quality evaluation of teaching in sum. ANOVA also shows that the F value is 299 which is in turn, significant; therefore, the F value shows that the total regression equilibrium is significant (see Table 5).

Table 5. ANOVA of variables in three different models

Stage	Entered variable	Item	Square sum	df	Square mean	F	Sig.
First	Evaluation results	Reg.	3147.403	1	3147.403	299.202	0.000
		Resi.	3176.831	302	10.519		
		Total	6324.234	303			
Second	Evaluation results	Reg.	3332.423	2	1666.212	167.634	0.000
	Teaching style	Resi.	2991.810	301	9.940		
		Total	6324.234	303			
Third	Evaluation results	Reg.	3376.220	3	1125.407	114.525	0.000
	Teaching style	Resi.	2948.013	300	9.827		
	Educational regulations	Total	6324.234	303			

6.2. Path Analysis

The concepts of path analysis are best explained through the main trait; that is, path analysis curve showing the possible causal links. To prepare a path curve, names of variables are written and then, an arrow is used towards another variable having effect in it.
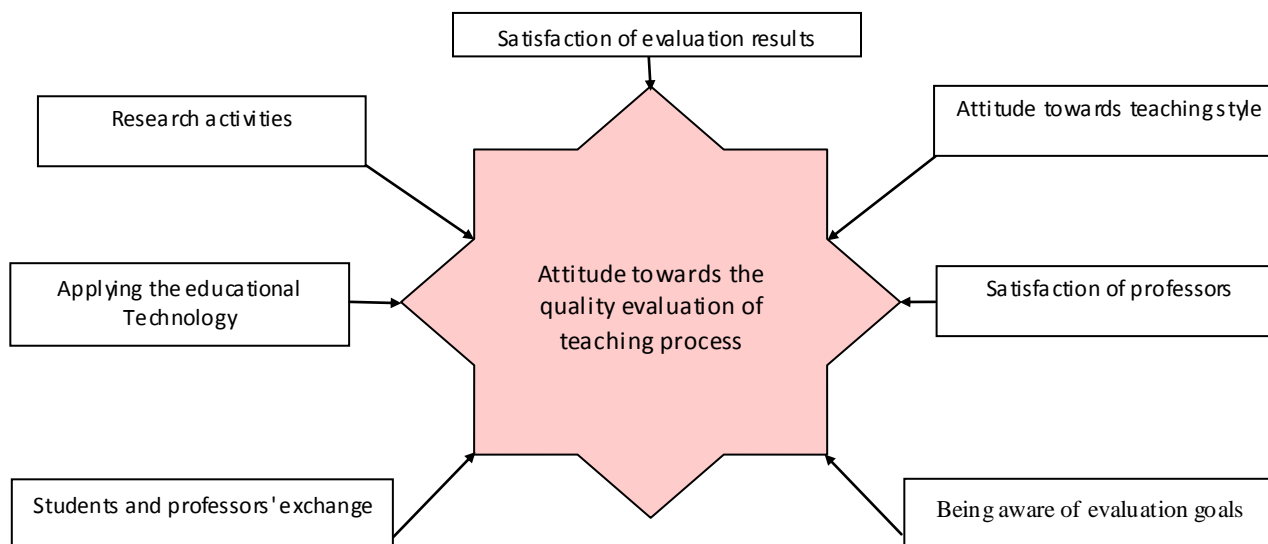
Figure 1. The effect of variables

7. Discussion and Conclusion

Evaluation of a professor's teaching method is a process that can help academic faculties improve their teaching method, promote their ability and get feedback that reflects their strong and weak points. As students are more affected by the education procedure, they can express their ideas qualitatively and quantitatively; therefore, it can be said that evaluation is valuable when it becomes a part of a professor's comprehensive evaluation plan.

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