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Perspectives of teaching staff about quality assurance process in Hawler Medical University: Q-methodology

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Abstract

Background and objective: quality assurance is the planned and systematic review of an institution to determine whether or not acceptable standards of education and infrastructure are being met, maintained and enhanced. This study intended to explore the perspectives of teaching staff about quality assurance process with the aim of uncovering commonalities and discrepancies among staff from the different educational background.

Methods: This explorative study was conducted in Erbil governorate, Iraq. Data were collected using Q methodology, a technique for eliciting subjective views and identifying shared patterns among individuals. A sample of 40 teaching staff in Hawler Medical University from the different educational background and academic titles were invited to sort a set of 42 statements reflecting various aspects of the quality assurance process into a distribution on a scale of nine from "disagree most" to "agree most." By-person factor analysis was used to derive latent views through centroid factor extraction and varimax rotation of factors.

Results: Analysis of the participants' Q sorts resulted in identifying four distinct views and experiences of quality assurance process: (i) Accepting the current quality assurance process with constructive criticism, (ii) Actively opposing the quality assurance process, (iii) General satisfaction with quality assurance process and (iv) Students' feedback concern. The typical characterizations that were associated with each view were highlighted.

Conclusions: This study revealed different patterns of views and experiences of teaching staff about quality assurance process and recognized the particular issues related to each pattern.

Keywords: Quality assurance; Hawler Medical University; Kurdistan region; Erbil.

Introduction

The notion of quality is hard to define precisely, especially in the context of tertiary education where institutions have broad autonomy to decide on their visions and missions. Various concepts have evolved to suit different contexts ranging from quality as a measure of excellence to quality as perfection, quality as value for money, quality as customer satisfaction, quality as fitness for purpose, and quality as transformation.[1] Some institutions have adopted the International Standards Office (ISO) approach in some of their activities. Depending on the definition selected, quality implies a relative measure of inputs, processes, outputs or learning outcomes. Institutions, funders, and the public need some method for obtaining assurance that the institution is keeping its promises to its stakeholders. This is the primary goal of quality assurance.[2] Quality Assurance is the planned and systematic review process of an institution or program to determine whether or not acceptable standards of education and infrastructure are being met, maintained and enhanced. It is an endless process, and its primary purpose is about developing the level of studying and learning, assessing teachers and students performance continuously and showing them the way for self-reformation and developing.[3,4] There is a need for a quality assurance system in higher education to

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enhance and improve student learning and to ensure that the higher institutes are meeting their mission and that they are compliant with the national or regional or international standards.[5] Raising standards of teaching and research in higher education institutions has long been a top priority for the people and government of the Kurdistan region, and it remains a top priority of the Ministry of Higher Education and Scientific Research today. With a mandate to ensure the quality of education in public and private universities, the Ministry of Higher Education and Scientific Research is charged with ensuring that all universities achieve a high level of quality, and thus secure the level of education of the populace of Kurdistan. In this sense, the Ministry is reviewing every aspect of the educational system in Kurdistan and subjecting it to radical change.[6] The Directorate of Quality Assurance has been established within the universities and is supervised by the Vice-President of the Scientific Affairs to enhance the effectiveness of the university's core activities and to help in improving the teaching and research standards and quality of services at the university. The Directorate of Quality Assurance is charged with the general duties of supervising and assessing quality of all services delivered at the university.[7] As such studies have not been conducted before, this study was intended to explore the perspectives of teaching staff about quality assurance process with the aim of uncovering commonalities and discrepancies among staff in different colleges, educational background, and academic titles.

Methods

This explorative study was carried out in Erbil, the capital of Iraqi Kurdistan region, from September 2014 to September 2016. The research ethics committee of Hawler Medical University approved the study. The study employed Q-methodology which is a research method that effectively combines the strength of qualitative and quantitative dimensions. Q data are readily amenable to numerical analysis and it is an exploratory, interpretation –intensive methodology suitable for a small number of participants and is strengthened by the statistical operation of factor analysis.[8-10] It is particularly useful in research that explores human perception and to identify different unique views as well as commonly shared views.[11] Typically, Q-methodology begins with a sample of statements (Q-set) that offer the fullest range of viewpoints on the study topic.[12] The study participants referred to as (P-set), representing the various sociodemographic group relevant to the topic of the study, are asked to rank order (Q-Sort) the Q-set along the standardized continuum according to specific instructions. Q-sorting involves ranking of statements about the topic under the study with a relative agreement or disagreement where statements only become meaningful about the position of other statements.[13-15] Correlation between personal profiles of the participants who hold a similar opinion, by correlating across individuals, Q-factor analysis, which involves an inverted factor analytic procedure, gives information about similarities and differences in viewpoints among the participants on a particular topic.[13,16]

Sampling:

As Q-methodology is a kind of exploratory factor analysis that is not designed for hypothesis testing, it is not typically subjected to sample size calculation.[17] In general, Q-studies consider 40-60 participants to be adequate for a study. It is recommended but not necessarily, to use some participants that is smaller than the number of items in the Q-set.[18] As the final set of statements of this study was 42 statements, it was decided to select 40 teaching staff to participate in this study. These 40 teaching staffs were purposively selected to include teaching staff from different colleges according to the number of teaching staff in each college with

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different background and academic titles. Selection of study participants was guided by the aim to maximize the possibility that a variety of perspectives could be expressed.[19] The aim is to have four or five persons defining each anticipated viewpoint, which are often two to four, and rarely more than six. Therefore, a sample size of 40 teaching staff was selected.[20]

Identification of statements

To determine the issues and viewpoints concerning quality assurance process in Hawler Medical University and Higher Education in general, four focus group discussions conducted with teaching staff in different colleges of the university. As a result of the statement identification step, 152 statements related to quality assurance process were extracted. All the statements were reviewed for similarities and differences. Statements that were repeated were discarded, some statements of close similarity were merged, and views which were polar opposite were deleted. Finally, 42 statements that potentially described and sufficiently represented the perspectives of the teaching staff about quality assurance process in the university were selected. The final set of 42 statements were numbered randomly and typed onto small cards with one statement per card. After the Q-sample had been created, the Q-sort was developed, which involved creating a quasi-normal distribution with a particular number of cells equal to the number of the Q-sample statements. This constituted the data collection instrument for the study.

Procedure

The selected staff were invited to participate in the study. Through a one-to-one session, the purpose of the study and clear step by step instructions for completing the task were explained to each participant by the researcher and participant's consent was obtained. Each participant was asked to sort the cards into nine piles from -4 (most disagree) to +4 (most agree), concerning his/ her perception of different aspects of quality assurance process and according to the Q-sort table. Through a one-to-one session the researcher read and explained each statement and asked the participant to distribute the statements into three initial piles of generally agree, disagree or neutral/not sure. Then the cards in each pile were revisited with the participant to distribute the cards according to the Q-sort table as per to the participant's level of agreement or disagreement with the statements.

Data Analysis

The PQMethod 2.11 program was used for the analysis of Q-sorts.[21] Centroid factor extraction and varimax rotation were used to obtain latent factors. Centroid refers to a kind of grand average of the relationships between all the sorts because they are represented by their correlation coefficients.[22] Varimax rotation positions factors so that the overall rotated solution accounts for as much of the explained variance as possible. This is achieved by ensuring that each Q-sort has a high factor loading on only one factor, an analytic technique that can reveal the majority viewpoints of sample.[18] Stringent criteria were used for factor selection.[23] Thus, factors representing at least two-factor exemplars (i.e. Q sorts or participant responses loading significantly upon one factor alone) and having eigenvalues greater than one were extracted. A conservative significance level of $P < 0.01$ was chosen for factor loading. Thus, those Q sorts that achieved a factor loading of 0.413 or above on a given factor were considered to have loaded significantly onto that factor.[20] An eigenvalue is the sum of squared loading for a factor; it conceptually represents the amount of variance accounted for by a factor.[24] The resultant factors represent sorts that were made by individuals who have responded in essentially the same way. When all of the weighted average scores of the statements of each factor are obtained from the correlation matrix, the statements are arranged in order of descending

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scores. This arrangement then forms the composite statement array for that factor. To facilitate comparisons between factors, composite statement scores are transformed back into the whole-number scores (+4, +3, etc.) used in the original sorting process. Factor arrays provide a conceptual representation of the factor.[25] A distinguishing statement for a factor is a statement whose score on that factor is significantly different from its score on any other factor.[10] Distinguishing statements that are significant at $p < 0.05$ are highlighted with asterisk (*), and those at $P < 0.01$ are highlighted with double asterisk (**) in the results section. Finally, a conceptual interpretation was developed to capture the essence of the viewpoints being endorsed. The comments made by the participants after Q sorting were transcribed and translated into English. Quotations relevant to different themes and subthemes of the extracted factors from the defining participants were derived from these transcripts.

Results

Forty teaching staff participated in the study. Their mean ± SD age was 46.2 ± 7.7 years. Details of the participants' socio-demographic characteristics are shown in Table 1.

Table 1: Socio-demographic characteristics of the participants.

Characteristic	No.	(%)
Gender		
Male	22	55.0
Female	18	45.0
Age Group		
30-39	10	25.0
40-49	14	35.0
50 +	16	40.0
College		
Medicine	15	37.5
Dentistry	7	17.5
Pharmacy	7	17.5
Nursing	7	17.5
Health Sciences	4	10.0
Academic Title		
Assist. Lecturer	5	12.5
Lecturer	14	35.0
Assistant Professor	18	45.0
Professor	3	7.5
Qualification		
M.Sc.	8	20.0
Ph.D.	32	80.0
Educational background		
Basic science	17	42.5
Clinical Science	23	57.5

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Analysis of the participants' Q-sorts resulted in four discrete perspectives (a four-factor solution) as shown in Table 2.

Table 2: Statements and factor scores.

#	Statement	Factor			
		1	**2**	**3**	**4**
1	Quality Assurance enhances participation.	-1	2	2	-1
2	Teacher portfolio makes teacher think systematically.	0	-3**	4**	-1
3	Topics of different seminars are new and up to date.	-2	-1	-1	-2
4	The quality assurance process is good for improving the ranking of the university.	1	1	1	-1**
5	No established written policy is available to direct quality assurance committee.	1	1	1	-2**
6	The quality assurance process started with enough orientation for the staff.	-4**	-2	2**	-2
7	There is lack of external assessment process.	2	2	-1**	2
8	All of the guidelines are central and some of them do not fit our university.	0**	2**	-1	-2
9	Most of the attendants in the seminars are not interested and attend for point collection.	4	4	-4**	4
10	Student feedback should be qualitative to reflect actual performance.	2**	-1	-2**	1
11	Time of the students' feedback should be at the end of the course.	-1**	3	2	1**
12	Feedback process should not be done by the staff themselves.	**2**	**3**	**2**	**0****
13	Best teacher of the university or college should be announced.	1	-4**	0	1
14	All departments and individual teaching staff get benefit from students' feedback	-3	-3	0	-1
15	Teacher portfolio makes teaching staff do different activities.	-1	-2	3**	1**
16	The quality assurance process differentiates between active and inactive teachers	-2	-2	4**	2**
17	Documentation is one of the positive aspects of the quality assurance process.	1	0**	3**	2
18	The announcement of different activities should be more systematic.	**3****	**-2****	**1**	**0**
19	Through this process, equal opportunities should be given to all.	0	0	1	1
20	The staff working in the quality assurance committee lack sufficient training.	-1*	1	1	-3**
21	The quality assurance process improves communication and socialization among the staff.	0	-1	-1	0
22	There is a lack of a well-addressed plan to overcome discrepancies.	**0**	**0**	**0**	**-1****
23	Measures obtained from the process are translated into real action.	-3**	1	1	-1**
24	Different elements of quality assurance (student feedback, teacher portfolio, and CME) should be separated from each other.	1	1	0	0
25	The quality assurance process is time-consuming.	**-2**	**3****	**-2**	**-4****
26	Students' feedback reflect actual performance of the teaching staff.	**-4**	**-4****	**-3**	**-3**
27	The quality assurance process enhances teaching staff to pay more attention to the education process.	-1	-1	2	3
28	Reward and punishment should be applied during the process.	3	2	-4**	1**
29	The quality assurance process enhances teaching process.	0	-1	3**	0
30	The quality assurance process makes evaluation of the staff much easier than before.	-2**	0	0	1
31	There is poor coordination between quality assurance committee in different colleges.	1	0	1	-3**
32	The used forms have been sent from the university without taking our opinion.	**-1**	**0**	**0**	**-2****
33	There is a lack of the role of technology in the process.	2	1	-1**	2
34	Most of the students' feedback are subjective.	0**	-3	-3	-4
35	The quality assurance process encourages competition among staff.	**0**	**-2****	**0**	**-1**
36	Teaching staff evaluation by the head of the department should be objective.	3	-1	-1	3
37	The point distribution of different activities is fair.	-3	4**	-2	0**
38	The quality assurance process improves the capacity of the staff.	-1	-1	-1	0**
39	Focus should be more on research activities.	2	2	-3**	3
40	The whole quality assurance process should be more attractive than the current situation.	4**	1	-2**	0
41	Student feedback should not be given too much weight in the evaluation process	-2	0**	-2	2**
42	Minimum and maximum points should be identified for different activities.	1	0	0	4**

* Distinguishing statement significant at <0.05 ** Distinguishing statement significant at <0.01

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The four factors were defined by 30 staff (75.0%), whereas ten participants did not have a statistically significant load on any of the factors. One factor reflected negative perspectives of quality assurance process and three factors highlighted positive perspectives.

Factor 1 – Accepting the current quality assurance process with constructive criticism

Factor 1 accounted for 15% of total variance with the Q-sorts of eight participants defining this factor. Of these factor exemplars, four were from the college of medicine; seven with the Ph.D. degree, six from the clinical background and five with assistant professor title. Figure 1 illustrates the ideal grid for this factor. Factor 1 emphasized a general acceptance of the quality assurance process with constructive criticism. The shared viewpoint amongst these defining participants is that the whole process should be more attractive than the current situation (40: 4**) and the announcement of different activities should be more systematic (18: 3**). They also suggested that the student feedback should be qualitative to reflect the actual performance of the staff (10: 2**). They disagreed with the viewpoint that the process started with enough orientation for the staff and students (6: -4**) and that measures obtained from the process are translated into real action (23: -3 **). Comparing to the other groups, this group of teaching staff least agreed with the statements that the time for the students' feedback should be at the end of the course (11:-1**) and the quality assurance process makes the evaluation of the staff much easier than before (30:-2**). They most agreed with the statement that most of the students' feedback are subjective (34: 0**) This factor was unique by having two neutral statements related to having all of the guidelines being central and some of them do not fit the university (8: 0**) and the staff working in the quality assurance committee lack sufficient training (20: -1*).

Disagree most							**Agree most**	
-4	**-3**	**-2**	**-1**	**0**	**+1**	**+2**	**+3**	**+4**
6**	14	3	1	2	4	7	18**	40**
26	23**	16	11**	8**	5	10**	28	9
	37	25	15	19	13	12	36	
		30**	20**	21	17	33		
		41	27	22	24	39		
			32	29	31			
			38	34**	42			
				35				

Figure 1: Ideal Q grids for Factor 1.

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Factor 2 - Actively opposing the quality assurance process

Factor 2 accounted for 8% of total variance with the Q-sorts of eight participants defining this factor. Of these factor exemplars, there were three from the college of pharmacy; five with a Ph.D. degree and six with the basic science background and three with assistant professor title. Figure 2 illustrates the ideal grid for this factor. Factor 2 viewpoint is oriented around actively opposing the whole quality assurance process. Defining participants strongly disagreed that the teacher portfolio makes teachers think systematically (2: -3**), all department and teaching staff get benefit from the process (14: -3), student feedback reflect actual performance of the staff (26: -4**), the best teacher of the university or college should be announced (13: -4**) and the quality assurance process encourage competition among the staff (35:-2**). They agreed that the process is time-consuming (25: 3**) and that most of the attendance of the seminars are not interested and attending just for point collection (9: 4). However, they strongly agreed that the point distribution of different activities is fair (37: 4**). In comparison with the other groups, the defining participants least disagreed with the statements that documentation is one of the positive aspects of the quality assurance process (17: 0**) and the announcement of different activities should be more systematic (18:-2**). This factor was unique by having one neutral statement related to the necessity of not giving too much weight to the student feedback in the evaluation process (41: 0**).

Disagree most							**Agree most**	
-4	**-3**	**-2**	**-1**	**0**	**+1**	**+2**	**+3**	**+4**
13**	2**	6	3	17**	4	1	11	9
26**	14	15	10	19	5	7	12	37**
	34	16	21	22	20	8**	25**	
		18**	27	30	23	28		
		35**	29	31	24	39		
			36	32	33			
			38	41**	40			
				42				

Figure 2: Ideal Q grids for factor 2.

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Factor 3 – General satisfaction with the quality assurance process

Factor 3 accounted for 8% of total variance with the Q-sorts of five participants defining this factor. Of these factor exemplars, two were from the College of Medicine; two from the College of Dentistry and one from the College of Pharmacy; five with the Ph.D. degrees and all of them from the basic science background; and three of them with the academic title of assistant professor. Figure 3 illustrates the ideal grid for this factor. The main view highlighted by factor 3 emphasizes a general satisfaction with most elements of the process. They agreed that teacher portfolio makes the teacher think systematically (2 : 4**), the quality assurance process started with enough orientation for the staff (6: 2**) and teacher portfolio make teaching staff do different activities (15 : 3**). They strongly agreed that quality assurance process differentiates between active and Inactive teachers (16: 4**), documentation is one of the positive aspects of the quality assurance process (17: 3**), and the quality assurance process enhances teaching process (29: 3**). They strongly disagree that most of the attendants in the seminars are not interested and are attending just for collecting points (9: -4**). They also disagreed about suggestion to change the current process like student feedback should be qualitative to reflect actual performance of the staff (10: -2**), rewards and punishments should be applied during the process (28: -4**), focus should be more on research activities (39: -3**) and the quality process should be more attracted than the current process (40: -2**). Comparing to other groups, these staff least disagreed that there is a lack of external assessment process (7: -1**) and there is a lack of the role of technology in the process (33: -1**).

Disagree most							**Agree most**	
-4	**-3**	**-2**	**-1**	**0**	**+1**	**+2**	**+3**	**+4**
9**	26	10**	3	13	4	1	15**	2**
28**	34	25	7**	14	5	6**	17**	16**
	39**	37	8	22	18	11	29**	
		40**	21	24	19	12		
		41	33**	30	20	27		
			36	32	23			
			38	35	31			
				42				

Figure 3: Ideal Q grids for factor three.

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Factor 4 – Students' feedback concern

Factor 4 accounted for 7% of total variance with the Q-sorts of nine participants defining this factor. Of these factor exemplars, four were from the College of Pharmacy, two from the College of Dentistry, two from the college of medicine and the remaining one from the college of health sciences; seven with PhD degree and six from the basic science background. Four of them were lecturers, and three of them were assistant professors. Figure 4 illustrates the ideal grid for this factor. The main view highlighted by factor 4 stresses the importance of students feedback in the process. They thought that students' feedback should not be given too much weight in the quality assurance process (41: 2**) and time of the students' feedback should be at the end of course (11:1**). They also agreed that the process differentiates between active and inactive teachers (16: 2**). They disagreed with negative statements about the process such as quality assurance is time-consuming (25 : -4**), no established written policy is available to direct quality assurance committee (5 : -2**), the staff working in the quality assurance committee lack sufficient training (20 : -3**), the used forms have been sent from the university without taking opinion of colleges (32: -2**), there is poor coordination between quality assurance committee in different colleges and the university (31: -3**) and there is lack of well addressed plan to overcome discrepancies in the process (22 : -1**). They strongly agreed that the minimum and maximum points should be identified for different activities (42: 4**). Comparing to the other groups, this group of staff least agreed with the statements that the quality assurance process is good for improving the ranking of the university (4: -1**) and the feedback process should not be done by the staff themselves (12: 0**). They most agreed with the statement that the quality assurance process improves the capacity of teaching staff (38:0**). This factor was unique by having four neutral statements related to having teacher portfolio make teacher do different activities (15 : 1**), the fairness of point distribution of different activities in the process (37:0**), rewards and punishment should be applied during the process (28 : 1**) and measures obtained from the process are translated into real action (23: -1**).

Disagree most							Agree most	
-4	**-3**	**-2**	**-1**	**0**	**+1**	**+2**	**+3**	**+4**
25**	26	3	1	12**	10	7	27	9
34	20**	5**	2	18	11**	16**	36	42
	31**	6	4**	21	13	17	39	
		8	14	24	15**	33		
		32**	22**	29	19	41**		
			23**	37**	28**			
			35	38**	30			
				40				

Figure 4: Ideal Q grids for factor four.

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Discussion

Participants loading on Factor 1 accepted the current quality assurance process with constructive criticism. The current system of quality assurance contains several elements that encourage the faculty staff to be actively engaged in scientific and research activities. It encourages them to participate in seminars, workshops, and conferences by presentation or attendance, conduct and publish research particularly in international journals, peer review research papers, etc. All these activities that are considered for CME scores in the quality assurance system provide opportunities for the faculty staff to update and develop their knowledge and skills. Therefore, this group of study participants accepted the current quality assurance process. The constructive criticism of this group of participants was related to having a more organized and structured system with a particular focus on having a more effective measure for students' feedback. The participants loading on Factor 2 actively opposed the quality assurance process with concerns about most of its components. It seems that this group of participants is not well integrated into the process. Applying the quality assurance process and CME system requires adequate preparation and integration of the faculty staff in the process so that they can actively participant in the process.[26] Many of the faculty staff of Hawler Medical University have extra duties regarding work in the hospitals, private clinics, and private hospitals. They barely have time to participate in the CME activities and document these activities. Using an easier and more user-friendly and time-saving system such as e-management system for the quality assurance would be of great help for this group of faculty staff.[27] The participants loading on Factor 3 had a general satisfaction with quality assurance process. This group had acknowledged the importance of the different quality assurance and CME elements that encourage the faculty staff to actively engage in scientific and research activities. This group might have being able to easily adapt to the system and integrate into its activities. Having such an opinion by this group indicates that the current quality assurance process is somewhat on the right track, although it needs many modifications and adjustments to be acceptable by all the faculty members. The participants loading on Factor 4 were primarily concerned with the students' feedback component of the quality assurance process. This component of students' feedback was also a concern by most of the other factors. Evaluation is an integral part of medical education. Although there are various methods of teachers' evaluation, student's feedback is considered as the most effective and reliable method albeit a controversial one. In fact, student ratings is a necessary source of evidence of teaching effectiveness and obtaining student's feedback is a routine practice in most of the institutions.[28] In terms of the quality of the delivery of lecture or instruction, it is generally agreed that only students are in a position to provide a good feedback.[29] However, it should be remembered that students are not competent enough to evaluate teaching roles such as those involving course design (objectives, content, methods, and assessment), or grading practice in assessment.[28]

Conclusion

Application of the quality assurance process is still a debatable issue among faculty members of Hawler Medical University. By identifying disagreement and consensus among faculty, four different perspectives on the quality assurance process were uncovered with having perspectives at both extremes of accepting and actively opposing the process. The typical characterizations that are associated with each perspective were highlighted.

List of abbreviations

QA: quality assurance

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Conflicts of interest

The author reports no conflicts of interest.

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