

## Academic Performance Measurement: Capacity Building for OIC-Affiliated Universities

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### **Introduction**

The OIC recognises that performance measurement is an integral component of quality management of academic activities. The quality of performance measurement is vital to a university's claim about the quality of its management of the curriculum, graduates, and research which define the trust and confidence of stakeholders and the general public. It is indisputable that in an institution of higher education, performance measurement is one of the major factors that influence the quality of faculty and student outcomes. Assessment shapes the learning, teaching and research that will take place; it molds what and how faculty will perform, and eventually what students will learn and how they will learn it. In sum, performance measurement is a catalyst for progress and reform in educational practices.

An academic performance measurement is valid and meaningful to the extent that it,

- provides a fair, reliable and valid basis for decision making processes;
- promotes faculty's interest, meta-cognition and self-assessment of their performance;
- directs faculty's continuous improvement and progressive development of competencies at higher levels;
- records and aggregate achievements in terms of the predetermined performance targets in research and publication;
- facilitates the review and upgrade the quality of the curriculum, courses, and programmes;
- allows the institution to conduct periodic, yet consistent review of the measurement system;
- represents world-wide standards and benchmarks, which permit inter and intra-faculty's comparison, at the institutional, regional, national and international level;
- helps define and protect academic standards deemed necessary for the purpose of accountability;

In general, the project is framed within the objective of developing university-wide policy and methods of academic performance measurement, given the potentials, limits and needs of each institution. This capacity building project would take place both on individual level and institutional level. Primarily it

Thus, the study will provide great contributions to the body of knowledge as well as to the practitioners and decision makers. In the sense that the study extends the Kirkpatrick model to a different context i.e. that of OIC and

it will also provide insights to the practitioners and decision makers on the level of effectiveness of the trainings conducted in the region.

### **Research model**

According to Bates (2004), currently the most popular approach in the evaluation of trainings in organizations is Kirkpatrick's (1976) framework of four levels criteria. This model is made of four main levels of training outcomes, namely, reaction, learning, behaviour and results.

The first level refers to the assessment of training participants' reaction to the training program. The second level serves to measure the content that has been delivered during training programs through a set of indicators. The behavioural level refers to the possibility whether the skills and knowledge acquired during the training can be applied to the job. Finally, the fourth level measures impact that the training has on the broad organisational goals and objectives (Kirkpatrick, 1976; Alliger and Janak, 1989).

The Kirkpatrick's model has been widely used in the previous studies on trainings effectiveness. This popularity is due to several reasons; however the most important among them is because the model addresses the need of trainings professionals to understand training evaluation in a systematic way (Shelton and Alliger, 1993).

Nevertheless, the model has never been used to study trainings effectiveness in the OIC region. Thus, the study attempts to fill the gap in the literature by applying the Kirkpatrick's model to the trainings conducted in the OIC region.

### **Methodology**

The data was collected during a training conducted for the academic personnel of the Islamic University in Uganda related to academic performance measurement for OIC universities. The program was conducted by three trainers from International Islamic University Malaysia in January 2012. The questionnaire contained two main parts. The first parts is meant to evaluate the trainers' knowledge of subject matter, their quality of instruction, their explanations, presentations and examples, their capacity to hold interest, and their communication skills. The second part is meant to evaluate the content of the training. All the items were measured on a five points likert scale. The data collected amounted to 130 responses that was subsequently analysed using descriptive statistics, t-test, and linear regression, using SPSS18.

### **Results**

#### *Descriptive statistics*

The initial results indicate that the trainees were satisfied with the trainers' knowledge of subject matter, quality of instruction, presentation, explanation and examples, capacity to hold interest as well as communication skills. This is shown by the mean values shown in Table 1 and that are largely higher than 3, and also by the frequency of "Very good" and "Excellent" responses shown in the frequency tables. Nevertheless, a more accurate test will be applied in the following section to examine the robustness of these results.

*Table 1: Descriptive statistics*

		Q1	Q2	Q3	Q4	Q5	Q6	Q1 1	Q1 2	Q13	Q1 4	Q1 5	Q2 0
N	Valid	12 9	12 9	12 7	12 7	12 9	12 8	13 0	12 9	129	13 0	13 0	13 0
	Missing	1	1	3	3	1	2	0	1	1	0	0	0
Mean		4.6 2	4.2 4	4.4 2	4.3 0	4.2 4	4.4 7	4.3 3	4.4 1	4.38	4.1 8	4.4 2	1.9 9
Std. Deviation		.58 9	.72 6	.79 1	.69 4	.72 6	.65 1	.66 3	.69 2	.664	.73 4	.62 1	.82 1

*One sample t-test*

The purpose of the t-test is to examine the significance of mean difference from the test value i.e. scale mean. For the test value of 3, the results indicate that the means are significantly different from 3. The positive mean difference further shows the positive perception of the trainees, regarding all the items above mentioned. Hence, the four dimensions of the Kirkpatrick model are achieved through the training i.e. reaction, learning, behaviour and results. In addition, independent samples test was also conducted, and the results indicate that there is no difference in perception about the three sessions conducted by the three trainers (results available upon request). In order to identify the variables that influence the trainees' perception, linear regression will be applied in the next section.

*Table 2: One sample t-test*

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Q1	31.248	128	.000	1.620	1.52	1.72
Q2	19.392	128	.000	1.240	1.11	1.37
Q3	20.187	126	.000	1.417	1.28	1.56
Q4	21.107	126	.000	1.299	1.18	1.42
Q5	19.392	128	.000	1.240	1.11	1.37
Q6	25.513	127	.000	1.469	1.35	1.58
Q11	22.871	129	.000	1.331	1.22	1.45
Q12	23.170	128	.000	1.411	1.29	1.53
Q13	23.612	128	.000	1.380	1.26	1.50
Q14	18.392	129	.000	1.185	1.06	1.31
Q15	26.133	129	.000	1.423	1.32	1.53

*Linear regression*

Prior to linear regression analysis, it is important to verify the collinearity between the independent variables. The results in the following table indicate that the independent variables have a high correlation with the dependent variables. At the same time, the correlation between the dependent variables is acceptable because it does not reach

a high level i.e. 0.7 and above. Nevertheless, the significance of these correlations will be tested in the following section.

Table 3: Correlation matrix 1

		Q1	Q2	Q3	Q4	Q5	Q6
Correlation	Q1	1.000	.604	.660	.554	.567	.769
	Q2	.604	1.000	.526	.519	.622	.700
	Q3	.660	.526	1.000	.511	.512	.695
	Q4	.554	.519	.511	1.000	.471	.644
	Q5	.567	.622	.512	.471	1.000	.700
	Q6	.769	.700	.695	.644	.700	1.000

Table 4: Correlation matrix 2

		Q11	Q12	Q13	Q14	Q15
Correlation	Q11	1.000	.463	.506	.533	.585
	Q12	.463	1.000	.541	.484	.559
	Q13	.506	.541	1.000	.533	.595
	Q14	.533	.484	.533	1.000	.674
	Q15	.585	.559	.595	.674	1.000

The results in the following section indicate that all the independent variables are significantly influencing the dependent variable. The independent variables being the trainers' knowledge of subject matter, their quality of instruction, presentation, explanation and examples, capacity to hold interest, as well as communication skill, while the dependent variable is the overall rating of the trainers by the trainees. The independent variables could explain 76.9 per cent of the variation in the dependent variable.

Table 5: Coefficients (Dependent Variable: Q6)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.044	.238		-.184	.855
	Q1	.336	.074	.305	4.551	.000
	Q2	.159	.056	.178	2.834	.005
	Q3	.155	.051	.189	3.057	.003
	Q4	.164	.053	.175	3.086	.003
	Q5	.212	.054	.237	3.937	.000

Similarly, the following table indicates that all the independent variables significantly influence the dependent variable i.e. the overall delivery of the content. The independent variables comprise of the topic, the course

material, as well as acquiring practical and skills and knowledge. These variables could explain 58.8 per cent of the variation in the dependent variable.

*Table 6: Coefficients (Dependent Variable: Q15)*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.749	.290		2.584	.011
	Q11	.190	.068	.203	2.779	.006
	Q12	.158	.065	.176	2.426	.017
	Q13	.184	.071	.197	2.591	.011
	Q14	.321	.064	.376	5.023	.000

#### **Conclusion**

The main objective of the study is to examine the training evaluation by the participants from the Islamic University in Uganda. The results indicate the participants were satisfied with the trainers as well the content of the training. Similarly, the results indicate that four dimensions of the Kirkpatrick model were achieved.

The above results have great implications to the theory since the Kirkpatrick model is extended to a new setting i.e. that of OIC countries and particularly Uganda. Furthermore, the findings also have significant implications for the practitioners and policy makers.

It is worth mentioning that the above findings will be further tested for validation purpose, since the same training will be conducted in other OIC member countries i.e. Bangladesh and Niger. Subsequently, other countries will also be studied.

#### **References**

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**Appendix: Frequency tables**

<b>Q1</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	P	1	8	.8	.8
	G	4	3.1	3.1	3.9
	VG	38	29.2	29.5	33.3
	E	86	66.2	66.7	100.0
	Total	129	99.2	100.0	
Missing	System	1	.8		
Total		130	100.0		

<b>Q2</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	P	2	1.5	1.6	1.6
	G	16	12.3	12.4	14.0
	VG	60	46.2	46.5	60.5
	E	51	39.2	39.5	100.0
	Total	129	99.2	100.0	
Missing	System	1	.8		
Total		130	100.0		

<b>Q3</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	VP	2	1.5	1.6	1.6
	G	12	9.2	9.4	11.0
	VG	42	32.3	33.1	44.1
	E	71	54.6	55.9	100.0
	Total	127	97.7	100.0	
Missing	System	3	2.3		
Total		130	100.0		

<b>Q4</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	P	1	.8	.8	.8
	G	14	10.8	11.0	11.8
	VG	58	44.6	45.7	57.5
	E	54	41.5	42.5	100.0
	Total	127	97.7	100.0	
Missing	System	3	2.3		
Total		130	100.0		

<b>Q5</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	P	4	3.1	3.1	3.1
	G	10	7.7	7.8	10.9
	VG	66	50.8	51.2	62.0
	E	49	37.7	38.0	100.0
	Total	129	99.2	100.0	
Missing	System	1	.8		
Total		130	100.0		

<b>Q6</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	VP	1	.8	.8	.8
	G	5	3.8	3.9	4.7
	VG	54	41.5	42.2	46.9
	E	68	52.3	53.1	100.0
	Total	128	98.5	100.0	
Missing	System	2	1.5		
Total		130	100.0		

<b>Q11</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DA	2	1.5	1.5	1.5
	FA	8	6.2	6.2	7.7
	A	65	50.0	50.0	57.7
	SA	55	42.3	42.3	100.0
	Total	130	100.0	100.0	

<b>Q12</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DA	3	2.3	2.3	2.3
	FA	6	4.6	4.7	7.0
	A	55	42.3	42.6	49.6
	SA	65	50.0	50.4	100.0
	Total	129	99.2	100.0	
Missing	System	1	.8		
Total		130	100.0		

<b>Q13</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DA	2	1.5	1.6	1.6
	FA	7	5.4	5.4	7.0
	A	60	46.2	46.5	53.5
	SA	60	46.2	46.5	100.0
	Total	129	99.2	100.0	
Missing	System	1	.8		
Total		130	100.0		

<b>Q14</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DA	3	2.3	2.3	2.3
	FA	16	12.3	12.3	14.6
	A	65	50.0	50.0	64.6
	SA	46	35.4	35.4	100.0
	Total	130	100.0	100.0	



<b>Q15</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DA	1	.8	.8	.8
	FA	6	4.6	4.6	5.4
	A	60	46.2	46.2	51.5
	SA	63	48.5	48.5	100.0
	Total	130	100.0	100.0	