Students' Survey Evaluation: A New Paradigm

Abdullah M Almarashi¹, Khushnoor Khan^{2*}

¹Deanship of Community Service and Continuing Education, King Abdulaziz University, Jeddah, KSA; ²Department of Statistics, Faculty of Science, King Abdulaziz University, Jeddah 21551, KSA *Email: khushnoorkhan64@gmail.com,

Received for publication: 10 January 2020. Accepted for publication: 01 March 2020.

Abstract

The lynchpin of any educational setup is the duo of student and teacher; the third vital component which regulates the activities of the duo is educational management of the setup. The present study focuses on eliciting the opinions of students from three diplomas organized by Deanship of Community Services and Continuing Education, King Abdulaziz University, Jeddah to study the effectiveness of diplomas. The instrument diploma evaluation questionnaire (DEQ) used to collect data was a modified version of the course evaluation questionnaire (CEQ) developed by the Saudi National commission of Assessment and Academic Accreditation (NCAAA). A sample of 240 diploma students both male and female participated in the study. Statistical evaluation was carried out using SPSS ver 21 and some relevant figures were drawn using AMOS software. Findings of this study coupled with other inputs can simultaneously be used by pedagogical staff and administrators to frame future policies for improving the quality of educational diplomas in an institution or program. Results of the study pinpointed some areas which need to be focused on in future diplomas: for instance, orientation about the diplomas needs more elaboration, provision of training material and linkage between the theory and practice be established. The relationship between the three subscales and Overall Evaluation (OE) is significant with 'Diploma evaluation' subscale as the most effective predictor for OE followed by 'During the diploma' subscale. The study also demonstrated the robust evidence of objectivity and data authenticity. The easy-to-follow approach has been adopted so that pedagogical and administrative staff can effectively use the techniques proposed in the current study. The evidence thus extracted can be used to structure efficient prospective policies than can surely enhance student experiences during their educational discourses.

Keywords: Diploma Evaluation, Perception, Community Diplomas, Satisfaction, Pedagogical staff

Introduction

Perceptions, attitudes, and behaviour of individuals/ students keep on varying over time and as such need to be evaluated off and on for continuous improvement of the processes or programs. As students are the main stakeholders in an educational set up so their perceptions and attitudes need to be gauged effectively to tune in the educational environment. Feedback from the students is usually devised on the pattern of a sample survey questionnaire. Survey instruments are the primary tools to elicit the perceptions of students. Algozzine et, al (2004) described a typical evaluation as possessing the following guideline:

(a) "An instrument is developed, comprised of a series of open- and closed-ended questions about course content and teaching effectiveness;

- (b) At least one item addresses 'overall' effectiveness;
- (c) Written comments about the course content and the effectiveness of the instructor are solicited:
 - (d) The anonymity of responses is assured and assumed;
 - (e) Responses are obtained at the end of the term in the absence of the instructor;
- (f) Item and scale responses are summarized across instructors, departments, and colleges and evidence of "teaching effectiveness" used in making various professional development decisions; and
- (g) Student (for example, GPA, academic year), course (required, graduate), and instructor (novice, experienced) differences largely are ignored in analysis and reporting of scores reflective of effectiveness" (p. 135).

From the perspective of this study, the focus is on the experience of students in diplomas that they undertook. Formal student surveys typically contain a grouping of items reflecting different dimensions of the student experience in a particular course, referred to as subscales. The various items included in course evaluation forms assess different and separable aspects of an instructor's teaching behaviors and the course. Generally, students assess each of these individually, ranking some more positively than others Beran, Violato & Kline (2007). Edstrom (2008) conversed that the pivotal factor in enhancing the performance of instructors is the course evaluation. Nasser & Fresko (2002) argued faculty perception issues that discussed that the faculty attitude reflected good rating and improving instruction. Denson et al. (2010) focused on examining the predictors of a student being satisfied and consequently found that faculty-selected optional questions are a stronger predictor for students' satisfaction. El-Sobkey (2014) studied the temporal stability of the student scale used for Academic Staff Evaluation. The framework of the current study has been adopted from Alghamdi et; al (2018) where students' perceptions students were measured through a course evaluation questionnaire, (CEQ) developed by the Saudi National commission of Assessment and Academic Accreditation (NCAAA). Though the authors have come across studies dealing with course evaluations but could not find studies dealing with diploma evaluations hence the raison d'être for the current study emerges. But the authors took considerable guidance from the book by Gravestock & Gregor (2008). The current study will highlight the appropriate statistical tools and relevant issues involved in quantitative analysis of survey instruments ranging from how to interpret rates and frequencies to unravelling relationships between the variables under study.

Rest of the paper proceeds as follows: Section 2 elaborates the methods and material used to conduct the study: Section 3 deals with statistical analyses and results: Section 4: deals with the discussion regarding the study results and concluding remarks. Future implications and limitations are addressed in section 5.

Materials and Methods

Rationale for Using Frequencies and Percentages

Rationale for using rates and percentages in the present study comes from Khushnoor, Alzahrani, & Khan (2018) "It is a common practice in pedagogical arena that a single summary mean scores of subscales or items are calculated through some menu-driven software and thus the results based entirely on these mean scores. Though mean is an effective measure of location nevertheless, in some circumstances we need to look deep into the data for actual causes affecting the value of the mean. The data in Table 1 will substantiate the foregoing premise:

Table 1. Illustrating the used of Frequencies and Percentages

Items	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean
1	5	5	5	5	5	75/25=3.0
2	2	14	0	0	9	75/25=3.0
3	1	2	0	0	14	75/25=3.0

Table 1 shows the responses of 25 participants on a three items scale. The mean value for all the three items is 3 which give us the idea that the respondent's views regarding the three items do not differ and all of them have opted for a neutral stance. But if we study the frequencies and percentages of each item individually then a very different picture emerges. For example for item 1 responses are equally distributed so it can be said that there is indecisiveness prevailing but for item 2 majority (more than 50%) of the respondents disagree or are not satisfied similarly for item 3 majority (more than 50%) of the respondents strongly agree or very much satisfied but the mean for item 2 and item 3 points towards a neutral stance. Hence, merely looking at the mean will not suffice thus for in-depth analysis frequencies and percentages have to be accounted for, for efficient use of the data".

Study Design/Setting/Data Collection

Current study is a cross-sectional in nature and aims at looking into the perceptions of the students regarding their overall experience in the diplomas that they are enrolled in. In this kind of study, the respondents' responds to different questions/ variables in one go i.e. there is only one time contact with the respondents. The DEQ was distributed, in the last week of 12 weeks diploma, to the students of four diplomas organized by faculty of community services & continuing education department studying at Al-King Abdulaziz University, Jeddah. The students were briefed about the importance of the research and were assured of their anonymity regarding the responses. Two hundred and seventy-five questionnaires were distributed, students were briefed about the questionnaire and a whole one hour was dedicated for filling the questionnaire. Twenty questionnaires were discarded on the reason of being filled in without reading the questions and opting for the same responses for all the questions. Thus the response rate was 87%.

Instrument

The instrument used was a modified version of DEQ which is developed by the Saudi National commission of Assessment and Academic Accreditation (NCAAA). The authors assessed the perceptions of students using both mean and frequencies/percentages. The questionnaire had two parts-first part consists of socio-demographic characteristics of the respondents and the second part consists of 26-items divided into four subscales. The four subscales cover several aspects of each diploma e.g. orientation of the diploma at the beginning of the semester, contents and evaluation, organization and clarity of the contents, student-teacher interaction, educational resources and ability to engage students intellectually. Altogether there are four subscales (variables) for which student responses were required. The first three are multiple item subscales and the fourth subscale consists of only one summary item which is used as a general quality indicator. The evaluation from this questionnaire will not directly assess the quality of teaching by individual instructors. However, the evaluation of the diploma is seen as a reasonable measure of the quality of teaching in a way that minimizes personal issues that could inhibit responses from students. The Questionnaire asks questions about several aspects of each diploma. Each item on the questionnaire is to be responded on a five-point scale. Where strongly agree = 5, agree= 4, true occasionally= 3, disagree = 2, strongly

disagree= 1. "Strongly agree" means the statement is true all or almost all of the time and/or very well done. "Agree" means the statement is true most of the time and/or fairly well done. "True occasionally" means something is done about half the time. "Disagree" means something is done poorly or not often done. "Strongly disagree" means something is done very badly or never or very rarely done. The numbers shown here are not included in the questionnaire. However, the response numbers will be used for summarizing responses from students and developing average responses to each item. NCAAA had already translated the questionnaire in Arabic hence, but the instrument was modified to some extent keeping in view the need of the diplomas under study; hence no problem was faced in explaining the terms.

Analyses

Data collected through DEQ were analyzed using three software SPSS, AMOS and R. For a visual representation of the data Bar charts for each item were produced. Regarding the proportion of responses on each item frequency and percentages of the responses were calculated. For inferential statistics p-value < 0.05 was considered as the benchmark for significance rather than 0.01 as the latter is considered a stringent benchmark in social sciences.

Reliability

Reliability refers to the consistency, stability, and generalizability of measurement data. Reliability coefficients typically range from .00 to 1.00 with higher values indicating greater consistency. For the present study, Cronbach's alpha was used as a reliability estimate. Cronbach's alpha for each scale was calculated through SPSS and a value of approximately 0.8 was considered as good value Marsh, (1987). But George & Mallery (2003) considered any value greater than or equal to 0.7 as acceptable. The values of the Cronbach's alpha in Table 2 ranged from 0.707 to 0.902 it indicates that there is a high level of internal consistency in the three subscales with sample size (N = 240).

Table 2. Internal Consistency of the Subscales (Cronbach's Alpha)

Subscales	Items	Cronbach's 'a'
1.Commencement of the Diploma	3	0.707
2. During the Diploma	16	0.889
3. Evaluation of the Diploma	4	0.902

Results

Sampling Characteristics

Table 3 exhibits the socio-demographic profiles of diploma participants. Gender equality is evident as there are approximately 50% males and 50% females. Majority of the participants attended Cybersecurity and Hajj& Umrah services diplomas. Age of eighty percent of the participants ranged from 20 to 40 years whereas, three-fourths were graduates or postgraduates. Somewhat equal representation of participants from Government and Private Institutions with the sole reason for taking the diplomas was the enhancement of knowledge in their respective fields.

Table 3. Sampling Characteristics of Diploma Students (*N*=240)

		Count	%
Diploma	Cyberpsychology	59	24.60
	Cyber Security	74	30.80
	Hajj & Umrah Services	94	39.20
	International Conferences	13	5.40

		Count	%
Gender	Males	121	50.40
	Females	119	49.60
Age	< 20	3	1.20
	20 < 30	89	37.10
	30 < 40	104	43.30
	40 < 50	37	15.40
	50 +	7	2.90
Educational Level	Ph.D.	6	2.50
	Masters	34	14.20
	Bachelors	164	68.30
	Diploma	12	5.00
	Intermediate	23	9.60
	Others	1	0.40
Marital Status	Married	128	53.30
	Bachelor	112	46.70
Employment Status	Government	87	36.20
	Private	94	39.20
	Others	59	24.60
Reason for doing the	Increase Knowledge	202	84.20
Diploma	Promotion	18	7.50
	Others	20	8.30

Rates and Frequency for Three Subscales

Tables 4-7 give a cursory picture regarding the preferences of the participants viz-e-viz the three subscales i.e. their perceptions before the commencement of the diplomas, during the diplomas and their evaluation about the diplomas and a single global item for an overall evaluation. From the first and third item in Table 4, it is clear that maximum students responded the course outline and the sources of help during the diploma including faculty office hours and reference material, were made clear to them and that they think that it is true most of the time and/or nicely done. But regarding the second item-things, they were required to do to be successful in the course including assessment tasks, reference material majority of students were of the view that these were taken care but not in the way as they should have been.

Table 4. Rates and Percentages for Subscale 1

Commencement of Diploma	Strongly Disagree		Disagree True Some times			Agree		Strongly Agree		Mean	
	n	%	n	%	n	%	n	%	n	%	
cd1	2	0.80	14	5.80	26	10.80	100	41.70	98	40.80	4.16
cd2	8	3.30	20	8.30	30	12.50	105	43.80	77	32.10	3.93
cd3	4	1.70	11	4.60	21	8.80	92	38.30	112	46.70	4.24

Only two items had mean scores of less than 4 in Table 5. The first of these i.e. dd-8 speaks about the availability of the resources (textbooks, library, computers, etc.). The mean response of the students' was 3.93 though the tilt of the students' perception was on the strongly agreed side but

needs more improvement. The second-lowest item dd-16 is about the linkage of the diploma with real-life experiences. Again response of the students was the lowest with the mean value of 3.88 though the majority of the students believed that the present course is somewhat linked with practical experiences but it still needs more input. All items of diploma evaluation in Table 6 had favorable responses and had a mean response rate exceeding 4 meaning thereby that the statement is true most of the time and/or fairly well done.

Table 5. Rates and Percentages for Subscale 2

During	Stro	ngly	Disa	gree	T	rue	Ag	ree	Stro	ngly	Mean
Diploma	Disa	igree			Sometimes				Ag	ree	
	n	%	n	%	n	%	n	%	n	%	
dd1	1	0.40	11	4.60	17	7.10	64	26.70	147	61.20	4.44
dd2	0	0.00	2	0.80	8	3.30	32	13.30	198	82.50	4.77
dd3	0	0.00	3	1.20	17	7.10	40	16.70	180	75.00	4.65
dd4	0	0.00	2	0.80	5	2.10	49	20.40	184	76.70	4.73
dd5	0	0.00	1	0.40	7	2.90	48	20.00	184	76.70	4.73
dd6	2	0.80	3	1.20	37	15.40	77	32.10	121	50.40	4.30
dd7	3	1.20	11	4.60	39	16.20	87	36.20	100	41.70	4.12
dd8	6	2.50	18	7.50	48	20.00	84	35.00	84	35.00	3.93
dd9	4	1.70	7	2.90	30	12.50	86	35.80	113	47.10	4.24
dd10	2	0.80	3	1.20	21	8.80	81	33.80	133	55.40	4.42
dd11	5	2.10	8	3.30	30	12.50	89	37.10	108	45.00	4.20
dd12	4	1.70	9	3.80	46	19.20	88	36.70	93	38.80	4.07
dd13	3	1.20	14	5.80	36	15.00	87	36.20	100	41.70	4.11
dd14	4	1.70	8	3.30	33	13.80	83	34.60	112	46.70	4.21
dd15	2	0.80	12	5.00	46	19.20	72	30.00	108	45.00	4.13
dd16	3	1.20	12	5.00	74	30.80	72	30.00	79	32.90	3.88

Table 6. Rates and Percentages for Subscale 3

Diploma Evaluation	Strongly Disagree Disagree		True Sometimes		Agree		Strongly Agree		Mean		
	Count	%	Count	%	Count	%	Count	%	Count	%	
de1	3	1.20	8	3.30	17	7.10	79	32.90	133	55.40	4.38
de2	5	2.10	6	2.50	33	13.80	83	34.60	113	47.10	4.22
de3	6	2.50	12	5.00	31	12.90	82	34.20	109	45.40	4.15
de4	5	2.10	4	1.70	42	17.50	78	32.50	111	46.20	4.19

Table 7 exhibits response rates, percentages, and means for the fourth global subscale consisting of a single item addressing the students' overall perception about the diploma. More than three-fourths of the students responded to agree and strongly agree with options with the mean response of 4.13 indicating a tilt towards the agree with the stance of the students meaning thereby that the statement is true most of the time and/or fairly well done. Marsh (1984, 1987) found that students' evaluations tended to be more positive if they had opted (rather than had been required) to take a particular module and if they had a previous interest in the subject.

Table 7. Rates and Percentages for Subscale 4

Overall	Strongly	Dis-	Disagree		True Ag		Agree		Strongly		
Evalua-	agre	e	Sometimes		times			Agree			
tion	Count	%	Count	%	Count	%	Count	%	Count	%	
O.E	4	1.70	6	2.50	37	15.40	101	42.10	92	38.30	4.13

- i. <u>Descriptive Statistics for four Scales:</u> Descriptive Statistics for the four subscales are displayed in Table 8 and exhibited in Figure 1.
 - a. Commencement/beginning of the Course (Mean=4.12): This is the average score of the first subscale regarding the orientation of the students concerning the course outline, assessment criteria and availability of educational resources.
 - b. During the Course (Mean=4.30): Overall average is 4.30 meaning thereby that on the average majority of the students were more than satisfied with the conduct of the course work during the semester. This variable consists of 16 items addressing the following five aspects.
 - Ability to Engage: Average score for emphasizing conceptual understanding/critical thinking and relating course topics to one another. Encouraging students to ask questions.
 - Interaction with Students: Average score for demonstrating concern for students' learning, motivating students, and availability out of class.
 - Content and Evaluation: Average score for worthwhile course content, coherent organization, choice of assignments, clear evaluation criteria, fair grading.
 - Educational Resources: Average score for resources needed to study during the course (textbook, library, computers, etc).
 - Organization and Clarity: Average score for the conduct of the course, course contents, integration of technology to support the learning process.
 - c. Course Evaluation (Mean=4.23): Average score for clear objectives, knowledge of course material, clear explanations, improvement of communication skills individually and in a group environment, distinguishing between more versus less important topics.
 - d. Overall (Mean=4.13): It is a summary question that is used as a general quality indicator for the whole course. The overall rating is the average of all students' responses to the overall quality of the course. It is not an average of other scores but an average of only one item. Research suggests that this category is the most valid and reliable measure of students' evaluation.
 - e. All subscales have mean response exceeding 4 and from the last column of Table 8 it can be seen that the mean scores are significantly different from the test value of 4 meaning at 5 percent level of significance, i.e. the students' responses for the whole population will be tilted towards strongly agree or more than satisfied with the conduct and working of the diplomas.

Table 8. **Descriptive** /**Inferential Statistics for the Four Subscales** (*N*=240)

Subscales	Mean	S.D	t-test	Sig. (2-tailed)
			(test value=4)	
Commencement of Diploma	4.12	.735	2.574	.011
During the Course	4.30	.516	9.257	.000
Diploma Evaluation	4.23	.813	4.483	.000
Overall Evaluation	4.13	.880	2.274	.014

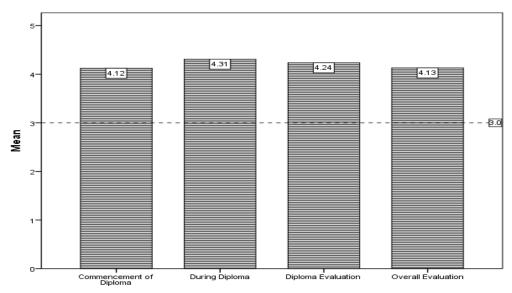
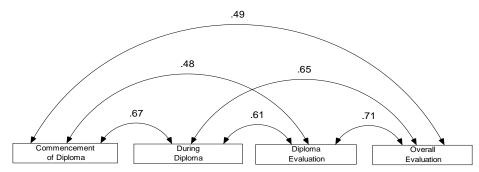


Figure 1. Bar charts showing means of the four subscales

ii. <u>Association Among the four Subscales:</u> The current study is not correlational rather an exploratory one but an association between the subscales be studied to view the overall picture of course evaluation in the right perspective. Association between the subscales is studied through correlation coefficients since the variables are on a continuous scale. Correlation coefficients, *r*, vary from 0 (no relationship) to 1 (perfect linear relationship) or -1 (perfect negative linear relationship). Positive coefficients indicate a direct relationship, indicating that as one variable increases, the other variable also increases. Negative correlation coefficients indicate an inverse relationship, indicating that as one variable increases, the other variable decreases. Cohen's (1977) standard to evaluate the correlation coefficient, are 0.10 which represents a weak association between the two variables, 0.30 represents a moderate association, and 0.50 represents a strong association. From Figure 2 we see that the correlations among the subscales range from 0.48 to 0.71 and all the subscales are having strong positive association i.e. a positive change in one subscale will have a positive change in the other subscales.



Correlations are significant at 0.01 Level of Significance

Figure 2. Showing correlation among the four subscales

To address the question of which subscale is the highest contributor in the good overall evaluation of the diplomas we see Figure 3 and Table 9 through both depict the same thing but with a Openly accessible at http://www.european-science.com

246

different perspective. Figure 3 tells us that the highest contributor to overall evaluation is the subscale 'diploma evaluation' with regression weight 0.49 followed by the subscale 'during diploma' with the regression weight 0.33 and from Table 9 we see that these to subscales are significant contributors as the p-values for both the subscales are less than 0.05. But the subscale is not a significant contributor as its p-value is greater than 0.05. Overall the three subscales when considered as a group are contributing 0.58 or 58% of the variation in the overall evaluation and this value is commonly referred to as Coefficient of determination or R².

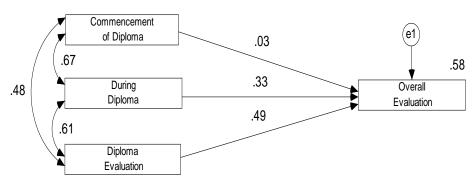


Figure 3. Showing Correlations and Standardized Regression Weights and R²

Table 9. Showing Beta Weights of the Subscales

Mode	el	Standardized coeffi- cients(Beta)	t	Sig.	
1	(Constant)		-2.309	.022	
	Commencement of Diploma	.031	.535	.593	
	During Diploma	.333	5.244	.000	
	Diploma Evaluation	.491	9.170	.000	

Conclusions

The lynchpin of any educational setup is the duo of student and teacher; management the third component in an educational set up-regulates the activities of the duo and acts as a go-between the two. Main Objective of the present study was to illustrate for the pedagogical and administrative staff a two-pronged strategy for dealing with the pool of information gathered through DEQ. The first one is; how to correctly analyze the collected data and second is what information to reduce i.e. transforming data into vital information to be used effectively for decision making in an educational institution. The present study highlighted the point that works done during the diploma and diploma evaluation aspects need to be looked into more carefully for the success of diplomas. The three areas which needed more improvement as shown in Table 10 were orientation, supporting material and linkage of theory with practice. The finding of this study coupled with other inputs can be simultaneously used by teachers and administrators to frame future policies for improving the quality of educational diplomas in an institution or program. Policies based on evidence help in bridging the gap between the desired and actual state of affairs in a much smoother way. We should not confuse a source of data with the evaluators who use it – in combination with other kinds of information – to make judgments about an instructor's teaching effectiveness (Cashin, 2003). Results of the present study would be handled as a valid base for improvement strategies and actions that may be taken by the academic programs. In this study robust evidence of objectivity and data authenticity was demonstrated.

Table 10. Areas where improvement needed

Areas for Im-	S	tudents R	esponses an	d Percenta	ges	Re-
provement	SD	D	SE	A	SA	marks/Suggestions
	(1)	(2)	(3)	(4)	(5)	
cd2: The things I	8	20	30	105	77	Orientation needs to
had to do to suc-	(3.3%)	(8.3%)	(12.5%)	(43.8%)	(32.1%)	be more elaborative
ceed in the Di-						and extensive. Learn-
ploma, including						ing objectives should
assessment tasks						be framed keeping in
and criteria for						view the Labour
assessment, were						Market.
made clear to me.						
dd8: The re-	6	18	48	84	84	More training ma-
sources I needed	(2.5%)	(7.5%)	(20%)	(35%)	(35%)	terial to be added
in this Diploma						both in the shape of
(textbooks, li-						soft and hard copies.
brary, computers,						
etc.) were avail-						
able when I						
needed them.						
dd16: The link	3	12	74	72	79	The linkage between
between this Di-	(1.2%)	(5%)	(30.8%)	(30%)	(32.9%)	theory and practice
ploma and gen-						should be established
eral area of the						and explained with
diploma were						real-life examples
made clear to me						.Experts from the
						relevant fields of
						study can be invited
						as guest speakers
						during the conduct
						of diplomas.

Limitations, Future Implications

- a. Since all respondents in the current study are from Community Services diplomas, therefore, the generalizability to other programs will be constrained. For a clearer view of the evaluation data in future shall be collected and analyzed from varied programs.
- b. The study was first of its kind in the deanship of community services and as such its comparison with previous studies was not possible. For initiating benchmarking paradigm students' evaluation should be a continuous feature in the forth coming diplomas.
- c. Results of DEQ by other universities in Saudi Arabia were not available so no cross comparison can be conducted.
- d. Some sought of contingency framework (moderation or mediation) may be carried to study the effect of different categorical variables like type of diploma, gender and employment status on the relationship between the three subscales and the overall satisfaction.

Acknowledgments

The authors personally acknowledge the support and paraphernalia provided by the Dean of Community services and continuing education *Dr. Hassan Saeed Alzaharani* and vice deans *Dr. Hameed Alsamadany and Dr. Yahya Almarhabi* during the collection of data and also drafting suggestions for improving the weak areas as pinpointed out in the current study.

References

- Algozzine, B., Beattie, J., Bray, M., Flowers, C., Gretes, J., Howley, L., Mohanty, G., & Spooner, F. (2004). Student evaluation of college teaching: A practice in search of principles. *College Teaching*, 52(4), 134-141.
- Alghamdi N G, Aslam M, Ayesha K, Khushnoor K (2018). Demystifying Undergraduate Student Perceptions in a Diploma Feedback Process, *Journal of Computational and Theoretical Nanoscience*, 15, 161–170,
- Beran, T., Violato, C., & Kline, D. (2007). What's the 'use' of student ratings of instruction for administrators? One university's experience. *Canadian Journal of Higher Education*, 17(1), 27-43.
- Cashin, W. E. (2003). Evaluating college and university teaching: Reflections of a practitioner. In J.C. Smart (Ed.), Higher education: Handbook of theory and research (pp. 531-593). Dordrecht, the Netherlands: Kluwer Academic Publishers.
- Cohen, J. (1977). Statistical power analysis for the behavioral sciences. Routledge
- Denson, N., Loveday, T., & Dalton, H. (2010). Student evaluation of courses: what predicts satisfaction? *Higher Education Research & Development*, 29(4), 339-356.
- Edström, K. (2008). Doing course evaluation as if learning matters most. *Higher education research & development*, 27(2), 95-106.
- El-Sobkey, Salwa B (2014). Temporal Stability of the Students Scale used for Academic Evaluation: *Arab Journal for Quality Assurance in Higher Education*. 7(15), 227-245
- George, D., & Mallery, P. (2003). SPSS for Windows step by step: A simple guide and reference. 11.0 update (4th ed.). Boston: Allyn & Bacon.
- Gravestock P, Gregor-Greenleaf E. (2008). *Student Diploma Evaluations: Research, Models, and Trends*. Toronto: Higher Education Quality Council of Ontario
- Khushnoor, A., Alzahrani, M. R., & Khan, K. (2018). An Insight into The Students 'Experiences Using Students Experience Questionnaire. Science International (Lahore). ISSN 1013-5316: CODENSINTE 8, March-April, 32(2), 209–218.
- Marsh. H. W. (2007). Students' evaluations of university teaching: Dimensionality, reliability, validity, potential biases, and usefulness. In R. P. Perry & J. C. Smart (Eds.), The Scholarship of teaching and learning in higher education: An evidence-based perspective (pp. 319-383). Dordrecht, the Netherlands: Springer.
- Marsh, H. (1984) Students' evaluations of university teaching: dimensionality, reliability, validity, potential biases, and utility *Journal of Educational Psychology*, 76, 707–754.
- Marsh, H. (1987) Students' evaluations of university teaching: Research findings, methodological issues, and directions for future research, *International Journal of Educational Research*, *11*, 253–388.
- Nasser, F., & Fresko, B. (2002). Faculty views of student evaluation of college teaching. *Assessment & Evaluation in Higher Education*, 27(2), 187-198.

Appendix A

Diploma Evaluation Questionnaire (DEQ)

Part –I (Demographics)						
Educational Qualification: Doctorate/Masters/Gra Employment Status: Government/Private/Unempl Part –II (Diploma Effectiveness) Do not write your name or identify yourself in a with the responses of others in a process that does the overall opinions will be used to plan for Diplom Please respond to the following questions by filling Do this $\bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc$ Reason for taking the diploma: (use \vee for your resp Enhancing knowledge For getting promotion in the job	oyed nny way. Your responses will be combined not allow any individual to be identified and na improvements. g a response for each of your answers.					
 Strongly agree means the statement is true all or almost all of the time and/or very well done. Agree means the statement is true most of the time and/or fairly well done. True sometimes means something is done about half the time. Disagree means something is done poorly or not often done. Questions about the start of the Diploma:	Strongly Agree Agree True Sometimee Strongly Disagree					
The Diploma outline (including the knowledge and skills the Diploma was designed to develop) was made clear to me.	0000					
The things I had to do to succeed in the Diploma, including assessment tasks and criteria for assessment, were made clear to me.	0000					
Sources of help for me during the Diploma including faculty office hours and reference material were made clear to me. Questions about what happened during the Diploma:	0000					
The conduct of the Diploma and the things I was asked to do were consistent with the Diploma outline.	0000					

a. b. c.

My instructor(s) were fully committed to the delivery of the Diploma. (Eg. classes started on time, the instructor always present, material well prepared, etc)	00000
My instructor(s) had a thorough knowledge of the content of the Diploma.	00000
My instructor(s) were available during office hours to help me.	00000
My instructor(s) were enthusiastic about what they	00000
were teaching My instructor(s) cared about my progress and were helpful to me.	00000
Diploma materials were of up to date and useful. (texts, handouts, references, etc.)	00000
The resources I needed in this Diploma (textbooks, library, computers, etc.) were available when I needed them.	00000
In this Diploma effective use was made of technology to support my learning.	00000
In this Diploma, I was encouraged to ask questions and develop my ideas	00000
In this Diploma, I was inspired to do my best work.	00000
The things I had to do in this Diploma (class activities, assignments, laboratories, etc) helped develop the knowledge and skills the Diploma was intended to teach.	00000
. The amount of work I had to do in this Diploma	00000
was reasonable for the credit hours allocated. Marks for assignments and tests in this Diploma were given to me within a reasonable time.	00000
Grading of my tests and assignments in this Diploma was fair and reasonable.	00000
. The link between this Diploma and the general area of the diploma were made clear to me.	00000

Openly accessible at http://www.european-science.com

What I learned from this Diploma is important and will be useful to me.	0	0	0	0	0
This Diploma helped me to improve my ability to think and solve problems rather than just memorize information.	0	0	0	0	0
This Diploma helped me to develop my skills in working as a member of a team.	0	0	0	0	0
This Diploma improved my ability to communicate effectively. Overall Evaluation	0	0	0	0	0
Overall, I was satisfied with the quality of this Diploma.	0	0	0	0	0