

Application of Eta Correlation in Determining the Effect of Demographic Profile on the Assessment of Quality of Higher Educational Institution of Cordillera Administrative Region

Roel S. Lumagsao, Rhowel M. Delloso

Abstract: The study aimed to determine the strength and determine the relationship between the nominal and interval scale data. The demographic profile of student respondents and the assessment of quality of higher educational institutions were used to as the nominal and interval scale data respectively. Descriptive research design was used for this purpose and correlation analysis using Eta correlation was utilized to determine the significant relationship between the demographic profile and the assessment of quality assurance of regional higher education institution. Findings showed that there is no significant relationship exists between the demographic profile and assessment of quality of higher educational institution of student respondents.

Index Terms: Eta correlation, Higher Educational Institution, Quality Assurance

I. INTRODUCTION

The Commission on Higher Education (CHED) used a standardized assessment instrument known as the Institutional Sustainability Assessment (ISA) instrument. This instrument determines the current status of the quality of the higher educational institution and may tell the institution on their strength and weaknesses [3]. The emphasis on the excellence lies on the never ending process to meet. As mentioned by [4], the need to measure the capability of Higher Educational Institutions (HEIs) is a good basis for determining the level of quality. Correlation analysis plays a vital role in determining the relationships between variables under study. Pearson correlation is the most commonly used test of relationship wherein it determines the relationship between two interval or ratio scale variables. On the other hand, chi-square is used to determine the relationship between two nominal scale variable and rank order and spearman correlation are used to determine the relationship between two ordinal variables on a non-parametric test [4]. According to [5], if there is a need to determine the relationship exist between categorical and scale variables the eta correlation will be the practical test of relationship used.

This paper analyzed the quality assurance status of regional HEIs using ISA instrument and determined the relationship between the demographic profile of respondents and the assessment of quality assurance of HEIs. The Cordillera Administrative Region (CAR) was the area under study. The assessment are in terms of governance and management, quality of teaching and learning, quality of professional exposure, quality of research and creative work and support to students and relations with the community. The use of eta correlation was necessary to determine the relationship between the demographic profile of respondents and the assessment of quality assurance of HEIs in CAR.

II. BACKGROUND OF THE STUDY

The quality of a certain product depends on the implementation of the standards. The paper of [1] mentioned that the Quality Assurance is initiated to get ahead and react to the trials in order to protect the good status of higher educational institution and to maintain business opportunity and assurance to those who engaged in education business, particularly the regional HEIs. The information of [1] suggested that there is a need to determine the quality of higher education institution. In addition every HEI's must be closely monitored by the quality assurance group from CHED. An Accrediting Institutions such as PAASCU, PACUCOA and ALCUCOA could also help in maintaining the relevance and quality of higher educational services provided to its clientele. Considering this advanced level of quality standard most of the HEIs have negative experiences on how to comply with the minimum quality standards of CHED.

A. Theoretical Framework

This paper used ISA Framework to assess the current status of HEI in the region. The concept was used by [1] wherein it stressed out the taken into consideration with proper validation several models of academic institution assurance that is considered as variable part of the academe business.

B. Conceptual Framework

Figure 1 depicted the paradigm of the study which is anchored with the theoretical framework. Developmental model is used wherein inputs refer to the assessment of quality assurance of HEI's in Cordillera Administrative Region (CAR) in terms of governance and management, quality of teaching and learning, quality of professional exposure,

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research and creative work and, support to students and relations with the community and the output was the regional educational quality assurance model for HEI's of CAR.

C. Paradigm of the Study

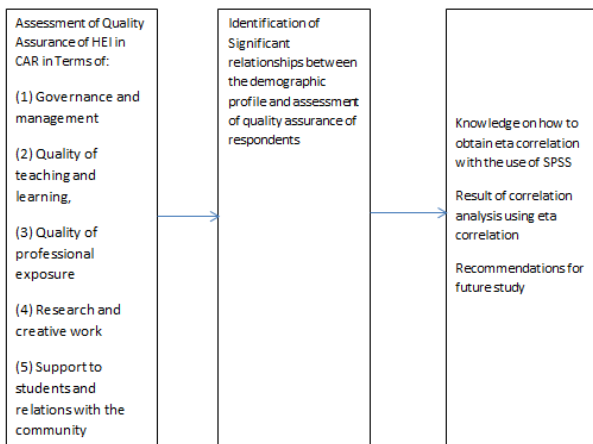


Fig. 1: Paradigm of the Study

Figure 1 showed the assessment of quality assurance as the input of the study, the process concerns on the identification of significance relationship between the demographic profile and assessment of quality assurance status of the respondents and the output concern with the knowledge acquire by the reader, result of correlation analysis using eta correlation and possible recommendations for future study.

D. Statement of the Problem

The main purpose of the study is to determine the relationship between the demographic profile and the assessment of quality assurance of higher education institution in regional setting. The following are the specific questions:

1. What is the quality assurance status of regional higher education institution based on institutional quality assurance?
2. Is there a significant relationship between the demographic profile of respondents and the quality assurance status?
3. Based on the findings of the study, what future studies can be proposed?

III. ETA CORRELATION WITH THE USE OF SPSS

The following are the steps on how to determine the eta correlation using SPSS.

1. Set up the variables in the variable view tab of SPSS

Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure
1 AGE	Numeric	8	0	(0, 18)	None	8	Right	Nominal	
2 GENDER	Numeric	8	0	(0, Male)	None	8	Right	Nominal	
3 YEAR	Numeric	8	0	(0, 1st)	None	8	Right	Nominal	
4 ASS_QA	Numeric	8	2	None	None	8	Right	Scale	

Fig. 2: Variable View Tab of SPSS

2. Since age, gender and year are set to nominal values, make sure that the numeric equivalents of nominal values are set also.

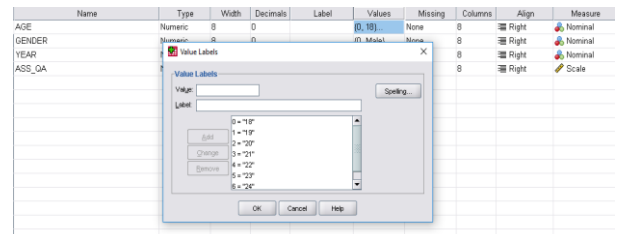


Fig. 3: Variable View Tab of SPSS

3. Encode the data in the Data View Tab of SPSS

	AGE	GENDER	YEAR	ASS_QA
103	6	1	3	4.20
104	6	1	2	3.08
105	5	1	3	4.43
106	3	1	2	4.05
107	3	1	3	4.18
108	2	1	2	3.93
109	1	1	3	3.08
110	1	1	2	3.50
111	1	1	3	4.10
112	0	1	2	3.73
113	6	0	3	3.95
114	6	0	2	4.43
115	6	0	2	4.58
116	6	0	0	4.80
117	6	0	0	3.65
118	6	0	0	4.35
119	5	0	0	4.83
120	5	0	0	3.48

Fig. 4: Data View Tab of SPSS

4. Once the encoding process is done, determine the significant relationship using eta correlation. To do this:

- a. From the menu, click "Analyze" then click "Descriptive Statistics" and Click "CrossTabs"

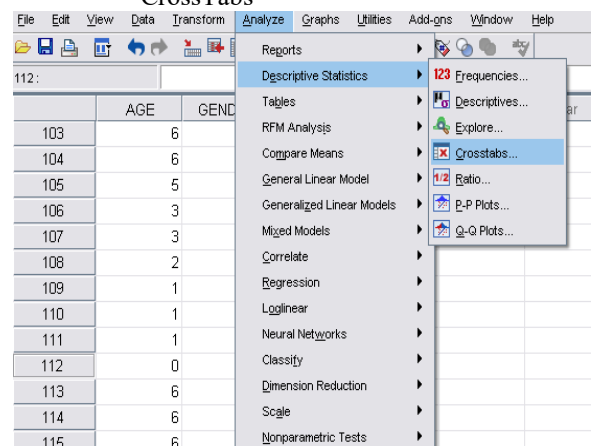


Fig. 5: Eta Correlation Setting up

- b. Then place all the nominal scale data in one place and the assessment or ratio or interval data into another place.

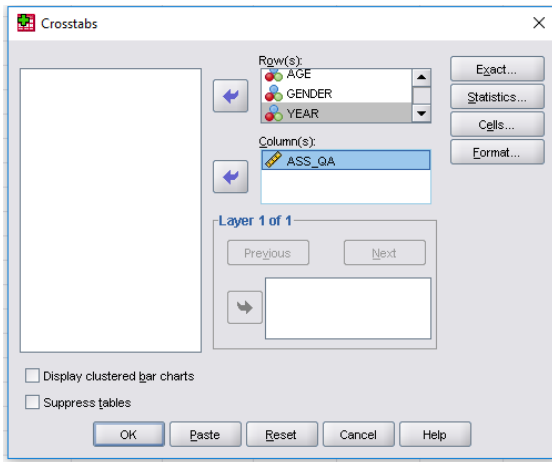


Fig. 5: CrossTabs Setting up

- c. Then click “Statistics” and click “eta” and click ‘continue’

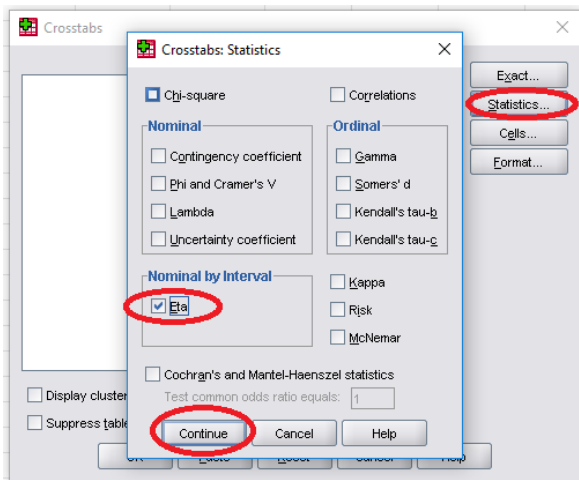


Fig. 6: Eta Setting up

- d. Then click ”Ok”

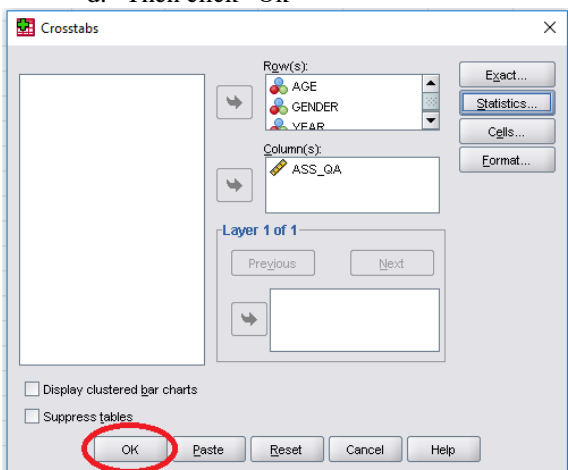


Fig. 7: Eta Setting up

- e. You will notice the output on the next figure. Look for the Directional Measures and find out the row that has Eta.

Directional Measures			Value
Nominal by Interval	Eta	AGE Dependent	.657
		ASS_QA Dependent	.180

Fig. 8: Eta Correlation Output

- f. Refer to the [6] for the interpretation.

IV. RESULTS AND ANALYSIS

This part presented the results based on the gathered data from the student respondents. The proponents used the ISA self-evaluation document and conducted the survey to five (5) selected schools of Cordillera Administrative Region (CAR) with a total of one hundred fifty five (155) student respondents. The instrument was composed of the respondents profile, institution profiles and the assessment on each of the statement. The respondent’s demographic profile determined the age, gender and academic standing year. The institution’s profile determined the basic institutional information, list of recognized and phased out programs, levels of accreditation and quality assurance mechanisms. And the assessment statement determined the perception of student respondents on the ISA criteria, which are composed of government and management, quality of teaching and learning, quality of professional exposure, research and creative work, support to students and relations with the community. The following information presents the answer on the problems.

A. Quality Assurance Status of selected Higher Education Institutions

Table I: Summary of Quality Assurance Status According to Students

AREA	As Expected		As Observed	
	Weighted Mean	Interpretation	Weighted Mean	Interpretation
1. Government and Governance	4.24	Very High	3.76	High
2. Quality of Teaching and Learning	4.54	Very High	3.49	High
3. Quality of Professional Exposure, Research and Creative Work	4.69	Very High	3.74	High
4. Support for Students	4.81	Very High	3.73	High
5. Relations with the Community	4.16	High	3.49	High
Over-all Composite Mean	4.49	Very High	3.64	High

Scale: Very High- 4.20-5.00, High - 3.40-4.19, Average - 2.60-3.39, Low-1.80-2.59, Very Low - 1.00-1.79

Table I shows the summary of quality assurance status as perceived by the students respondents. The “As Expected” responses resulted a composite mean with “Very High” interpretation while the “As Observed” responses resulted a composite mean of 3.64 with “High” interpretation. From the result of assessments of student respondents, 80% or 4 out of 5 areas of quality assurance of “As Expected” observations had the “Very High” interpretation while the rest of area had the “High” interpretation. On the other hand, the “As Observed” observations show that all of the areas of quality assurance had the “High” interpretation. This means that there is an existing quality assurance with some areas for improvement as described by the slight difference in weighted means of two observations.

B. The Significant Relationship between the demographic profile and assessment of quality assurance of student respondents.

The following data summarized the result of eta correlation with the use of SPSS.



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Table II: Directional Measure for Age and Assessment of Quality Assurance

			Value
Nominal by Interval	Eta	AGE Dependent	.657
		ASS_QA Dependent	.180

Table II shows the eta correlation using SPSS. It is revealed that no significant relationship exist between the age and assessment of quality assurance of student respondents as described by ($r = 0.180$) as weak to no relationship at all.

Table III: Directional Measure for Gender and Assessment of Quality Assurance

			Value
Nominal by Interval	Eta	GENDER Dependent	.667
		ASS_QA Dependent	.146

Table III shows the eta correlation using SPSS. It is revealed that no significant relationship exist between the gender and assessment of quality assurance of student respondents as described by ($r = 0.146$) as weak to no relationship at all.

Table IV: Directional Measure for Gender and Assessment of Quality Assurance

			Value
Nominal by Interval	Eta	YEAR Dependent	.620
		ASS_QA Dependent	.149

Table IV shows the eta correlation using SPSS. It is revealed that no significant relationship exist between the gender and assessment of quality assurance of student respondents as described by ($r = 0.149$) as weak to no relationship at all.

V. CONCLUSION AND FUTURE WORKS

The proponent utilized the ISA Document provided by CHED and conducted the survey to five (5) selected schools of Cordillera Administrative Region (CAR) in 155 student respondents. Based on the findings of the study, the following conclusions were made:

1. The "As Expected" ratings show that 80% or 4 out of 5 areas of quality assurance resulted to "Very High" interpretation while the rest of areas resulted to "High" interpretation. On the other hand, the "As Observed" ratings show that all of the areas of quality assurance resulted to "High" interpretation.

2. From the finding of the result, it shows that there is no significant relationship exists between the demographic profile and the assessment of student respondents. This means that the students regardless of gender, age and academic year standing is independent on their perceptions.

Future study may use administrators as respondents in a wider scope and determine if the result of correlation analysis of student respondents is the same with administrator respondents.

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Roel S. Lumagsao holds a Ph.D. in Developmental Administration from the Philippine Christian University. He is a licensed professional teacher with more than 30 years in the practice. He is the Vice President for Academic Affairs of City Malabon University, Philippines.



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