A REVIEW OF MODELS AND TECHNIQUES USED TO GAUGE QUALITY IN HIGHER EDUCATION

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Abstract
The purpose of this paper is to examine various models and techniques used in HEIs around the world with a specific focus on four elements which are: the dimensions or areas covered in the quality evaluation, the instruments used for data collection, the targeted stakeholders, and the statistical analyses used for the data gathered. A review of high indexed publications was done and the focus of the search was on the specific elements. It was found that on average, there are five dimensions used in these studies which are mainly related to academic aspects and administrative services. The Questionnaire was the instrument used for data collection in all these models. The majority of these studies targeted one stakeholder of HEIs which is the current students. Different level of statistical tests were used in the analysis of the selected papers. These findings will be an important contribution to the field of quality of higher education with its critical focus on the methodological implementation in the review of the literature.

Keywords: Quality Models; Quality Techniques; Instruments; Stakeholders; Quality Dimensions; Higher Education Institution

Introduction
There are four different classifications for Higher Education Institutions (HEIs) according to their importance and purpose: institutions that produce skilled manpower; produce researchers; manage teaching process; and spread life ventures. There can be an overlap between these classifications within the same institute (Barnett, 1994; Field, 2005).

Quality of Higher Education (HE) should be defined differently than some businesses since “Producing like-minded and homogenous graduates is not the aims of higher education” (Kalayci & Basaran, 2013, p. 56). It is a multifaceted concept that has eluded clear definition (Singh, Sandeep, & Kumar, 2008). According to the UNESCO, it is “a multidimensional concept which must involve all its functions and activities” (da Costa Vieira & Raguenet Troccoli, 2012, p. 19). So, quality in higher education is defined in different settings according to the HE multiple dimensions. Each definition shows the main focus of the HEI like the assessment method, teaching and learning processes and quality of its graduates among others. It is really important to find out which classification the HEI belongs to before initiating any assessment or evaluation process towards quality. Generally, there are five different approaches to defining quality in higher education—namely exception, perfection, fit for purpose, value for money, and transformation (Hamad & Hammadi, 2011).
Meeting the required quality standards in any institute needs satisfaction from its customers. In HE Sector the definition of customer, or stakeholder, is a debate. According to Sarrico and Rosa (2014), customers of a HEI include students, academic staff, non-academic staff, parents, alumni, employers, the ministry responsible and society as a whole. According to Pereira and Da Silva (2003), there are two types of customers for HEIs: internal and external. Internal customers are those who “receive the outputs of these systems and external customers are those who work in the process in these systems”(Pereira & Da Silva, 2003, p. 8). There are three main process in most HEI which are: teaching, leaning, and research. For each process, the internal and external customers differ (see Table 1 below).

Table 1: The main customer of teaching, learning, and research process

<table>
<thead>
<tr>
<th>Process</th>
<th>Internal Customer</th>
<th>External customers</th>
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<tbody>
<tr>
<td>Teaching</td>
<td>Faculty</td>
<td>Student</td>
</tr>
<tr>
<td>Leaning</td>
<td>Student</td>
<td>Employer</td>
</tr>
<tr>
<td>Research</td>
<td>Faculty</td>
<td>Society/Government</td>
</tr>
</tbody>
</table>

Source: (Pereira & Da Silva, 2003, p. 14)

Still, as it is known in the UK, satisfying the students should come first as they are called “primary customers” (Abdullah, 2006a, p. 569). On the other hand, as educators, it is very important to keep in mind that satisfying the students’ long-term needs is the target and not satisfying their short-term desires (Winn & Green, 1998).

Measuring the quality has received a strong attention by the international organizations and world leading HEIs. The reason behind it is that measurements play an essential part of HEI’s evaluation as well as its continuous improvement. Therefore, it is an important task for any HEI to implement some quality measures and assessments which are suitable to its structure. This can be used also for audits preparations by national or international bodies. So, the HEI’s main objective has to be taking into consideration while establishing quality assurance system for any HEI. Any HEI has to have an internal quality assurance system before considering external reviews like audits, accreditations, and ranking. Taking into account “the causality of rankings and ratings” (Meyer, Hanson, & Hickman, 2017, p. 242) on the HEIs such as affecting HEI’s popularity and number of enrollments. Therefore, having a proper internal mechanism to manage the quality gives the institute a healthy stand so that it can think of having an external assessment. Statistical methods play an important role in such processes as “they provide the principal means by which a product is sampled, tested, and evaluated, and the information in those data is used to control and improve the process and the product”(Montgomery, 2007, p. 61). Many HEIs around the world have used different kinds of measurements to control the performance of institutions’ activities and “to inform the public as well as stakeholders of the nature of the institution and its relative position in the country/sector” (Al-Sarmi & Al-Hemyari, 2014, p. 245). Montgomery (2007, p. 61) defined Statistics as “the language in which development engineers, manufacturing, procurement, management, and other functional components of the business communicate about quality”. This statement shows the important role of statistics in the field of quality.

Hogg and Hogg (1995) discussed the importance of using statistics for the quality of HEIs and the opening statement of the paper was "TQM comprises more than statistics; but, without statistics, it is often 'smoke and mirrors'”(Hogg & Hogg, 1995, p. 35) which shows the importance of using statistics in the field of quality in order to get more accurate figures. According to Hogg and Hogg (1995) a very small number of tools which are currently used for quality improvement are statistical tools (15%) and these tools are; Flow Charts, Cause-and-effect Diagrams (Ishikawa Fishbone), Pareto Chart, Histogram, Run Chart, Scatterplots, and
Moreover, a small fraction (out of this 15%) goes for advanced statistical tools like Regression and Response Surfaces, Multivariate Techniques, and Time Series. This shows a lack of awareness about the importance of statistics and how statistics can give a clearer picture for taking decisions. The role of Statisticians/ Academic Statisticians in HEIs was highlighted as they can assist a HEI in collecting, analyzing, and interpreting the data. On the other hand, Hogg and Hogg (1995) emphasized the key technical elements which graduates should possess like statistical thinking, getting relevant data, and communicating with statistics. Again, Widrick, Mergen, and Grant (2010) had listed the measurement tools which can be used for three Quality Dimensions (Design, Conformance, and Performance) in the area of Research and Curriculum Development in HE. Below is a sample of proposed tools where some of them are statistical tools: Pareto Analysis, Trend Analysis, Control Charts, Matrix, Bar Chart, Histogram, Fishbone, Checklist, Benchmarking, Flow Diagram, Tree Diagram, Quality Function Deployment, Conformation Check-Sheet, and Affinity Diagram. The Widrick et al. (2010) demonstrated how measurement tools can be used to improve productively in the area of quality assurance. They also questioned on how can any HEI improves a certain area if it does not has measurements on its current performance. They strongly emphasized that “measurement is an integral part of continuous improvement” (Widrick et al., 2010, p. 130).

Al Amri, Jani, and Zubairi (2015) studied the effectiveness of the measurement tools which are used to ensure the quality of some HEIs in Oman. It was found that 60% of the interviewed quality assurance managers rated these tools as good and the remaining 40% of these managers rated them as fair. The researchers found that the most commonly used tools are summary statistics and surveys. Generally, the most instruments used in HEIs are surveys or questionnaires for decision making, and gathering opinions (Barge & Gehlbach, 2012; Mijić & Janković, 2014). However, Loukkola and Zhang (2010, pp. 37-38) pointed that HEIs are “good at collecting information, but not always using it”. This is shown a doubt about the actual usage of the information and data gathered by HEIs for quality activities, planning, and development. Service Quality techniques were adopted to Higher Education sector in the last century. The most frequent quality methods used are Total Quality Management (TQM), Quality Function Deployment (QFD), Six Sigma, ISO9001, and Malcolm Baldrige National Quality Award (Quinn, Lemay, Larsen, & Johnson, 2009). In addition, there is EFQM Model and some other quality measurement techniques which have been produced ad hoc for HEIs like Student Satisfaction Questionnaires. From 1985-1988, the SERVQUAL Model was developed and then it was modified to SERVPERF. Also, some models were developed and implemented in HE sector like IPA (Importance-Performance Analysis), I-S Model (Importance-Satisfaction), EP (Evaluated Performance), NQ (Normed Quality), HETQMEX (HE TQM Excellence) and a few more (Abdullah, 2006b; Martínez-Caroa, Cegarra-Navarro, & Cepeda-Carrionc, 2014).

In any HEI, there are two types of services provided which are; Academic Services (related to faculty members, teaching processes, examinations, and other academic matters) and Support Services (related to non-academic facilities like sports, extra-curricular activities, transportsations, and other administrative matters). It is important to measure the satisfaction level of stakeholders on both services. Different models and techniques are used by HEIs to measure the effectiveness of various services. The performance of these models and techniques depends on elements such as type of instruments used, the dimensions or areas covered, targeted stakeholders, and the analysis used for the information gathered. However, there are many studies that discussed the module and techniques used by HEI for quality such as (Nicholson, 2011; Ryan, 2015; Sunder M & Management, 2016), there are no studies found which give critical focus to these elements.
Our contributions to the absence of such studies are: (1) to explore the instruments used, (2) to identify the targeted stakeholder(s), (3) to investigate the dimensions or areas covered, and (3) to examine the type of analysis used for the data gathered.

The rest of the paper is organized as: second part comprises research methods, part three present an overview of the selected models and techniques used at HEIs for quality purposes, part four, five, six, and seven discuss the findings of each element as follow; dismussions, statistical analysis, stakeholders, and instruments.

Research Methods
A narrative review was carried out. It was found to be the most appropriate method for the aim of the study as it provides a review with some systematised elements (Bearman et al., 2012, p. 626). The outcome of the review is qualitative not quantitative (Mayer, 2009).

To ensure the quality of the studies covered, all the papers selected for the review are peer reviewed publications published in journals indexed in web of Science, Science Direct, Taylor & Francis, and Springer. The search terms were “quality”, “Higher Education”, “model”, “techniques”, and “instrument”. More than 20 papers were screened, out of them 13 papers were selected for the review. There is a specific criterion for the selected papers which is that the selected papers should explain the implementation of a specific model or techniques at single or multiple HEIs. The varieties of models, techniques, and methods implemented for measuring the quality of HEIs was taken into consideration. Thus, we selected one study about the following methods; HEdPERF-HE PERFormance only, Survey, Analytical Hierarchical Process (AHP), Total Quality Management (TQM), SERVQUAL, Structural Equation Modelling, Performance Evaluation Model, Gap Analysis, Statistical Survey, Balanced Scored Method (BSC), Higher Education Quality Assessment Model (HEQAM), Higher Education Service Quality model (HiEduQual), and Multi-order Hierarchical Model of Quality Management.

We picked certain details from these different studies, put them in a table in an excel sheet (see Appendix), and checked the similarities between these studies in terms of:

- Model or Technique applied in the HEI(s) to measure the quality of its services.
- Model Dimensions, area or services covered for the implementation.
- Instruments or methods used to collect the data.
- Targeted Stakeholder for the implementation.
- Number of HEIs covered for the implementation.
- Statistical analysis used to analyze the data gathered.
- Context or country covered for the implementation.

Overview of the selected models and techniques used at HEIs for quality purposes

In this section, we present an overview of the 13 studies included in this paper. A summary of the review is available in the Appendix.

Abdullah (2006a) talked about the model HEdPERF (Higher Education PERFormance only) which is a new measurement scale. This model is different from other services quality models implemented in HE sector so far, as it is built for the sector specifically. The model contains Six Dimensions which are: Non-Academic Aspects, Academic Aspects, Reputation, Access, Programme Issues, and Understanding. A detailed description of the development and validation stages of this model was illustrated in the paper. This study was implemented in Malaysia where students from six HEIs had participated. The instrument used was a questionnaire. Several Statistical methods were used during the development and validation stages of the model which are: Test of Normality, Factor Analysis, Confirmatory Factor
Analysis, Reliability Analysis, Validity Test, and Multiple Regression Analysis. This model is directing HEIs to give more attention to student experience and to evaluate it effectively. To do so, using such new models would help more than using traditional systems like standards, accreditations, and performance indicators. That is because performance indicator—for instance—can tell something about the quality but it cannot measure the quality. This study was implemented for one group of HE customers/stakeholders which is the student however the researcher has called for other investigations targeting other groups like: internal customers, employers, government, parents and general public. Also, he looks forward to finding out whether this model will give the same results if it was implemented in some other countries.

Nasser, Khoury, and Abouchedid (2008) surveyed the students’ satisfaction with services and programs of HEI in Lebanon. Self-assessed knowledge on six dimensions were collected. The dimensions used are academic experience, academic advisor, personal life, campus life, personal development opportunities, and student services. The student’s sample was selected by using cluster random selection (n=870). The study was questioning at what level of awareness of university’s rules and producers do students feel more satisfied and at what level of study do they show higher level of satisfaction. A questionnaire was designed for this purpose which included 31 knowledge items and 33 satisfaction items. The analysis was done by using ANOVA and regression analysis.

Tsinidou, Gerogiannis, and Fitsilis (2010) had implemented AHP (Analytical Hierarchical Process) to find out the factors determining quality services in one of the HEIs in Greece. The authors used the questionnaire which was developed by Hellenic Quality Assurance Agency for Higher Education. There are seven main dimensions with some sub-criteria under each. The dimensions used are: Academic Staff, Administration Services, Library Services, Curriculum Structure, Location, Infrastructure, and Career Prospects. The results were calculated by using Pairwise Comparison between the different criteria. The positive aspect of this model is that it “allows the students to decide which factor they regard the most important in assessing quality of the services” (Tsinidou et al., 2010, p. 237). The outcome of this study is useful for improving the internal QA system of the HEI as it is highlighting what students perceived more. Total Quality Management (TQM) was implemented in Pakistani HEIs to know the critical success factors of TQM implementations in HE Asif, Awan, Khan, and Ahmad (2013). 30 HEIs were covered in this study through Quality Enhancement Cells in Pakistan. The instrument was developed using Confirmatory Factor analysis (CFA). It was found that there are six success factors of TQM in HE which are: vision, measurement & evaluation, process control & improvement, program design & resources, other stakeholder’s focus, and leadership. SERVQUAL was employed to measure the quality of five universities in Bangkok, Thailand (Yousapronpaiboon, 2013). The dimensions used are reliability, responsiveness, assurance, empathy, and tangible. The researcher found that there are negative gaps in all five dimensions between students’ perceptions and expectations. Cronbach Alpha was used to test the reliability and then descriptive statistics (mean and standard deviation) was used to analyze the results. It is worth mentioning that positive gap means that quality of services provided is satisfactory in which expectations are met or exceeded and negative gaps refers to the quality of services provided is unsatisfactory in which expectations are not met. Performance Evaluation Model was used at a university offering e-learning courses in Spain (Martínez-Caroa et al., 2014). A sample of enrolled students from different courses had participated in the study. This model was useful as it helped this HEI to know the areas where this model gave high importance, but the satisfaction level of students was low and the areas where the model gave low importance, but the satisfaction level of students was high. Practically, it helped HEI to manage its resources and to minimize resource wastage. The
instrument used was a questionnaire with a total of 20 items grouped under four dimensions which are: Student-Student Interaction, Teacher-Student Interaction, Content, and System Flexibility and Convenience. The reliability was assessed by using Cronbach’s Alpha and then Performance Control Limits (PCMI, PUCL, and PLCL) were calculated. However, this model was designed for e-learning mode of teaching and it can be modified to be applicable for other teaching methods.

Ardeleana, Titan, and Druica (2014) studied the perceptions of Romanian students on the quality of HEIs. This study was a reaction for ranking Romania as 42nd in the world out of 50 countries. A statistical survey was conducted for students of Romanian HEIs to know their opinion of quality of HEIs comparing to other HEIs in Europe. A SWOT analysis was used to evaluate the quality of Romanian higher education. The researchers strongly recommended improving the quality of HEIs and said, “the quality of students depends primarily on the quality of higher education.”

Balanced Scored Method (BSC) was performed to evaluate the effectiveness of accounting education at a university in Turkey (Özpeynirci, Yücenürşen, Apak, & Polat, 2014). BSC is a performance measurement tool which combined routine activities with long term plans. BSC’s dimensions were used which are financial, customer, internal processes, and learning and growing. For each dimension, the targets were listed along with their measures. A survey for 3rd and 4th year students were administrated. Descriptive statistics was used for the analysis.

Noaman, Ragab, Madbouly, Khedra, and Fayoumi (2017) explained the development of the higher education quality assessment model (HEQAM) at a university in Kingdom of Saudi Arabia (KSA). The model contains of eight criteria or dimension which are curriculum, staff, career prospects, infrastructure, e-services, library services, administrative services, and location quality. Two questionnaires were developed based on SERVQUAL model to students and experts including the faculty members. Data analysis was made by using pairwise comparison matrix.

The Higher Education Service Quality model (HiEduQual) was developed and validated at seven HEIs in Pakistan by Latif, Latif, Farooq Sahibzada, Ullah, and Excellence (2019). Focus group discussions with four different stakeholders of HEIs named students, parents, teachers, and employers were conducted to set the questionnaire items. Data was collected from students of seven different HEIs and then it was analyzed by using exploratory factor analysis and confirmatory factor analysis. The main factors or dimensions found were teacher quality, administrative services, knowledge services, activities, continuous improvement, and leadership quality.

Hossain and Hossain (2019) have developed a multi-order hierarchical model of quality management. The data were collected by using questionnaire from students of six HEIs in Bangladesh. The analysis was carried out by using component-based parametric approach of structural equation modeling (SEM). It was found that there are eleven different dimensions measuring the quality of HEIs which are curriculum, teaching competence, career development, health & safety, tangibles, deliverables, outcome effort, leadership, accessibility, image, and social life.

**Dimensions covered when evaluating the quality of HEIs**

The number of dimensions used in these studies ranged from four to eleven. However, there were no specific dimensions used in two studies. Few points were observed:

- Almost the same dimensions were used but with different terminologies such as program issues (Abdullah, 2006b), curriculum structure (Tsinidou et al., 2010),
curriculum (Hossain & Hossain, 2019; Noaman et al., 2017), learning and growing (Özpeynirci et al., 2014), and content (Martínez-Caroa et al., 2014).

- Wider demission like administrative services (Tsinidou et al., 2010) are divided into library services (Noaman et al., 2017; Tsinidou et al., 2010), e-services (Noaman et al., 2017), knowledge services (Latif et al., 2019), student services (Nasser et al., 2008), and health and safety (Hossain & Hossain, 2019) in the other studies.

- The studies which implemented services quality models used different dimensions which are reliability, responsibility, assurance, empathy, and tangibles (Dlačić, Arslanagić, Kadić-Maglajlić, Marković, & Raspor, 2014; Yousapronpaiboon, 2013).

Stakeholders involved for evaluating the quality of HEIs

It was found that the main targeted stakeholder in these studies was students of HEIs. These findings further support the ideas of (Abdullah, 2006a; Winn & Green, 1998) that students are the primary focus of any HEI. There were only two studies which studied the expectations of their staff members (Asif et al., 2013; Noaman et al., 2017). Other stakeholders like employers, government officials, parents, and graduates were the targeted in any of these studies.

Instruments used to collect the data required to evaluate the quality of HEIs

All these 13 studies used the same instrument which is questionnaire. This finding is in agreement with (Barge & Gehlbach, 2012; Mijić & Janković, 2014) that survey is the instrument used in most of studies at HEIs for planning and decision making.

Statistical Analysis used for the data gathered for quality proposes at HEIs

The level of statistics applied in these studies is different. It varies from very basic statistics to advanced statistics. Statistics was mainly used during the analysis stages however it was used during the instruments’ development of the studies such as Cronbach’s alpha (Martínez-Caroa et al., 2014; Yousapronpaiboon, 2013). Factor analysis (exploratory or confirmatory) is the most commonly used statistical test (Abdullah, 2006b; Asif et al., 2013; Dlačić et al., 2014; Latif et al., 2019). There are some are test which were used across these studies such as;

- Descriptive statistics (Ardeleana et al., 2014; Özpeynirci et al., 2014; Yousapronpaiboon, 2013)
- ANOVA (Nasser et al., 2008; Sarrico & Rosa, 2014)
- Pairwise comparisons (Noaman et al., 2017; Tsinidou et al., 2010)
- Regression (Abdullah, 2006b; Nasser et al., 2008)
- Structural Equation Modelling (Dlačić et al., 2014; Hossain & Hossain, 2019)

So, these results show that these 13 studies do not depend on basic statistics alone, but also advanced statistical methods were used. This finding of this review contradict with the finding of Hogg and Hogg (1995).

Conclusion

This paper has presented a brief review of more than ten selected peer-reviewed journal papers related to implementation of quality models and techniques in HEIs. The review focused on certain elements which are the dimensions covered, the instruments used, the stakeholders targeted, and the type of statistical analyses used.

It was found that there are some similarities in the dimensions used in the reviewed studies. Moreover, this study has shown that studies in HEIs give more attention to one group of stakeholders, the students, more than other important stakeholders such as employers and staff.
members. The third major finding was that the only instruments used in these studies was the Questionnaire. It was also shown that there is ample awareness about the importance of using advanced statistical tools to get more insightful and accurate results which can be used for quality improvement and planning.

The findings of this study have several important implications for future practice. First, the results of the study suggest that HEIs should gather the opinions and expectations of other stakeholders in order to have a complete picture about the quality of the academic and administrative services provided. Moreover, the evidence of this study suggests to the researchers in the field to use other instruments such as focus group discussions and interviews along with the Questionnaire to triangulate data sources and confirm the results. The findings of this study are subject to one limitation which is the number of studies covered in the review. Further research is needed with a larger number of studies.

References


### Appendix

Summary of all research studies discussed

<table>
<thead>
<tr>
<th>No.</th>
<th>Study</th>
<th>Model or Technique</th>
<th>Model Dimensions</th>
<th>Instruments</th>
<th>Targeted Stakeholder</th>
<th>No of HEIs Covered</th>
<th>Statistics Used</th>
<th>Context</th>
</tr>
</thead>
</table>
| 1   | Abdullah (2006b) | HEdPERF            | 1. Non-Academic Aspects  
2. Academic Aspects  
3. Reputation  
4. Access  
5. Programme Issues  
6. Understanding | Structured Questionnaire | Current Students | 6 | Test of Normality, Factor Analysis, Confirmatory Factor Analysis, Reliability Analysis, Validity Test & Multiple Regression Analysis | Malaysia |
2. Academic Advisor  
3. Residential Life  
4. Campus Life  
5. Personal Development Opportunities  
6. Resources  
7. Student Services | Questionnaire | Current Student | 1 | ANOVA and Regression Analysis | Lebanon |
| 3   | Tsinidou et al. (2010) | Analytical Hierarchical Process (AHP) | 1. Academic Staff  
2. Administration Services  
3. Library Services  
4. Curriculum Structure  
5. Location  
6. Infrastructure  
7. Career Prospects | Questionnaire | Current Students | 1 | Pairwise Comparison | Greece |
<p>| 4   | Asif et al. (2013) | Total Quality Management (TQM) | Nil | Questionnaire | Staff | 30 HEIs | Confirmatory Factor analysis, comparative fit index, the root mean square error of approximation, parameter estimates, squared multiple correlations | Pakistan |</p>
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<tr>
<th>No.</th>
<th>Study</th>
<th>Model or Technique</th>
<th>Model Dimensions</th>
<th>Instruments</th>
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<th>No of HEIs Covered</th>
<th>Statistics Used</th>
<th>Context</th>
</tr>
</thead>
</table>
| 5   | Yousapronpai boon (2013) | SERVQUAL | 1. Reliability  
2. Responsiveness  
3. Assurance  
4. Empathy  
5. Tangibles | Questionnaire | Current Student | 5 | Cronbach’s Alpha & Descriptive Statistics & Gap Analysis | Thailand |
| 6   | Dlačić et al. (2014) | Structural Equation Modelling | Modified SERVQUAL Services Quality Scale | Questionnaire | Current Students | 2 | Exploratory Factor Analysis & Structural Equation Modelling | Bosnia, Herzegovina Croatia |
| 7   | Martínez-Caroa et al. (2014) | Performance Evaluation Model | 1. Student-Student Interaction  
2. Teacher-Student Interaction  
3. Content  
4. System Flexibility and Conveniency | Questionnaire | Current Students | 1 | Cronbach’s Alpha & Performance Control Limits (PCMI, PUCL, PLCL) | Spain |
2. Academic Support  
3. Personal Development  
4. Processes and Services  
5. Degree and Institution | Questionnaire | Current Students | All HEIs in Portugal | Paired sample t-tests, T-test for independence, One-Way Analyses of Variance (ANOVAs), & Non-Parametric Kruskal-Wallis Test | Portugal |
<p>| 9   | Ardeleana et al. (2014) | Statistical Survey | Nil | Questionnaire | All HEIs in Bucharest | Measures of Central Tendency, Contingency Table and Test Statistics $\chi^2$ | Romania |</p>
<table>
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<tr>
<th>No.</th>
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