The Effect of Competence on Teaching Quality in Yemeni Universities

Author's Details:
Abeer Mohammed Ghamdhan[(1)] Amani Ali El Metwally [(2)] Abdullah Abdul Elah Ali Sallam[(3)] Tim Walters [(1) (2) (3)] Faculty of Applied & Human Sciences, University Malaysia Perlis, Malaysia

Abstract:
Previous literature leaves questions about whether students' perspectives have a role in assessing teaching quality. Few studies of teaching quality have answered whether students' perspectives affect or improve teaching quality in higher education institutes. This study used competence as an extension of a Self-determination Theory to examine the quality of teaching in Yemeni universities. The respondents were between 18 and 26 years of age who were currently pursuing their studies in four Yemeni Universities. Data were collected through self-administered survey questionnaires and analyzed using SPSS version 22.0. A total of 500 sets of questionnaires were distributed, and 415 questionnaires were returned and used for coding, analysis, and hypothesis testing. The findings showed that competence positively influenced teaching quality. The results also demonstrated that the hypothesized model was fit. The perceptions of university staff and professionals concerning their level of satisfaction were suggested for future research.
Keywords: *Teaching quality, competence, university, Self-determination Theory, Yemen*

1. Introduction

Universities worldwide have experienced large-scale reform and change over the past quarter-century and are now focusing on boosting quality. Teaching quality remains a controversial topic and a vital issue that needs more research emphasis because of the present educational challenges at the university level (Mohaideen & Aizuddin, 2017).

The evaluation of lecturers and teaching is essential for improving higher education (Nasser & Fresko, 2002) and, used properly, can help to boost teaching quality (Hammonds, Mariano, Ammons, & Chambers, 2017). Growth is a target for most, if not all, private and public academic institutions (Muthanna & Sang, 2018). Such growth is not restricted merely to quantity but also is related to concerns associated with quality. Quality in higher education is often conceived in terms of achieving educational goals, excellence, and value (Jain, Sinha & Sahney, 2011; Muthanna & Sang, 2018). Assessments of quality may also concentrate on customer satisfaction, efficiency, the fitness of learning purposes, and high standards (Tang & Zairi, 1998; Watty, 2006). Additionally, a quality assessment may also be concerned with academics, administration, and facilities, which reliability, personal attention, and the comfort and features of campuses influence (Sultan & Wong, 2013).

Teaching quality matters for achieving excellent learning outcomes (Hanushek, Kain, O'Brien & Rivkin, 2005; Hanushek & Rivkin, 2006; Goos & Salomons, 2017) and outcomes later in life (Chetty, Friedman & Rockoff, 2014), and an essential facet of teaching quality remains instructional instruction (Nye, Konstantopoulos & Hedges, 2004; Rivkin, Hanushek & Kain, 2005). Numerous problems are present in the educational system in Yemen according to the latest report of The World Bank concerning the status of higher education in Yemen and the report of the United Nations Development Programme (UNDP) - Regional Bureau for Arab States (RBAS) on Quality Assessment of Education Programmes in Arab countries (Alshohybe, Al-Raimi, & Almutawkkil, 2016). According to the Global Competitiveness Index 2017-2018 edition, Yemen's Ranking is 137 (Sala & Schwab, 2011).

Aligolbandi et al. (2017) believe that teaching quality plays a pivotal role that should be taken into account as part of universities' educational objectives. High teaching quality produces optimal learning quality and can be defined as promoting effective learning opportunities for students in educational centers (Aligolbandi et al., 2017; Shaabani & Hossaingholizadeh, 2006). High-quality instruction can be considered a metric of a teaching institution's effectiveness, resulting in better student learning and higher satisfaction

(Mohaideen & Aizuddin, 2017). Because students are the core of education and the participants in the entire process (Zhang, 2017), student evaluation of teaching quality is of considerable significance.

Oliver (2003) and Masuwai (2019) has asserted that both standards and qualitative metrics in teaching and learning are vital parts of the teaching-and-learning program and the process of a program's developmental path and the teaching environment, provide guidance for universities, develop student satisfaction, and provide essential quantitative developments. During the past few decades, major studies have been conducted concerning enhancing university quality (Meymand & Abdoli, 2015). Regular and continual student evaluations of lectures help make teaching more efficient. Thus, this current study judges the teaching quality of Yemeni universities from the viewpoint of students.

For decades, a key, growing international focus has concentrated on boosting teaching quality (Dinham, 2013). Because teaching plays an essential role in the lifelong development of students (Zhang, 2017), society has placed a high value on teaching quality. Thus, a teaching quality evaluation and monitoring system is an essential measure to boost teaching quality and, therefore, is of practical significance for improving universities' teaching quality. Moreover, if a quality evaluation system promotes teaching development in higher education, then the system must obtain enough support and participation (Karthikeyan & Vasuki, 2016). Currently, within the educational policy community, a trend has grown to utilize student evaluations for assessing teaching quality.

In a report on global competitiveness, Sala-i-Martin and Schwab (2011) noted that most Arab states performed poorly in the quality of their education systems. Hence, teaching quality is a critical issue in Arab states that warrants additional emphasis from researchers because of educational challenges at the university level (Ahmed, Ahmed & Siddiek, 2018).

At the turn of the century, the World Bank (2011) reported that no formal, institutional assessments of student achievement in higher education existed and that high student-staff ratios pointed to poor conditions for high-quality teaching and learning. In Yemen, the ratio was 41:1 while 23:1 was the norm for the MENA region. Qualitative indicators additionally pointed to instructional weakness and the poor usage of Information Technology (World Bank, 2011).

The current research investigated the teaching quality of Yemeni university lecturers in a quantitative study. It examined the structure and relationships of teaching quality with other aspects of the competence, autonomy, and communication of lecturers with students as perceived by their students. Educational theory is not something to be imposed upon the teaching profession by academic or scientific experts but should be rooted in a more systematic study of classroom-based pedagogies and concerned with the lived realities of lecturers' work (OECD, 2009; Shagrir, 2015).

Besides, the performance of lecturers in teaching in Yemeni universities has been accessed as being low and has affected the enhancement of their professional knowledge and experience (Alabidi, 2014; Mofreh, Ghafar, Omar& Ma'ruf, 2014).

Considering all the above concerns, the teaching quality in Yemeni universities, particularly in their conceptualization of knowledge and the world around them, has strategic significance. The effectiveness of higher education institutions should be related to high-quality performance in teaching and research (Díaz-Méndez & Gummesson, 2012; Robinson & Hope, 2013; Zeichner, Payne, & Brayko, 2015).

Academics have begun debating the appropriateness of viewing students as customers (Cuthbert, 2010); however, research that applies this viewpoint in evaluating teaching remains scant (Ip, Iong, Wu, & Wang, 2017). This current study seeks to fill this knowledge gap and is intended to create teaching evaluation metrics from students' viewpoints as customers. Kim and Kim (2010) highlighted the need to study further the intricate pathways between lecturer competency domains and teaching quality. This study explored these relations according to Self-determination Theory. This is an essential area of research because of the importance of lecturer evaluation and because low competence, autonomy, and communication among lecturers may affect the teaching quality adversely.

2. Literature Review

2.1 Teaching quality

Teaching quality is among the most crucial factors that impact student learning (Wallace, Kelcey & Ruzek, 2016). Students spent a tremendous amount of time with their lecturers. Depending on the quality of teaching, this time can be valuable, a complete waste of time, or even detrimental to students (León, Medina-Garrido, & Ortega, 2018). That is because teaching quality and how lecturers manage classroom learning and interact with students impact the engagement and motivation of students (Fauth et al., 2014).

Education emphasizes creating ways to boost teaching quality and learning by boosting learners' abilities, knowledge, and skills through classroom motivation (Javed, 2017). The role of instructors is to influence students' achievement either directly or indirectly during classroom teaching (Javed, 2017), and a lecturer is a pivotal player in the classroom environment. In this context, some studies have shown that student feedback has helped lecturers improve their classroom performance (Lokman et al., 2018) and make a substantial contribution towards the execution of their jobs (Tøndel et al., 2018).

Research like this current study is critical in creating a definition of "teaching quality" concerning the several conceptualizations of higher education and quality (Prakash, 2018; Dahl & Smimou, 2011). Thus, researchers have carried on with this task, intending to provide a more comprehensive definition in mind and have discussed quality from students' viewpoint or have utilized lecturers as a reference point. For instance, Houston (2008) and Krajewski, Ritzman, and Malhotra (2010) said that customer satisfaction could be used to define quality. From the perspective of a classroom environment, students are customers. According to Avasilcai and Hutu (2003), Guolla (1999), and Marie, Cono, and Fernandes (2016), students can be seen as both customers and products because they pay a significant amount of money for their education and they are products of the higher education system (Marie et al., 2016). Indeed, the documents that the National Unions of Students in Europe produced within the Bologna Process underline the consequence of student involvement in the evaluation processes to encourage growth in awareness of being part of university life (Bassi, Clerci & Aquario, 2017).

2.2 Competence affects teaching quality

Competence can be defined as a feeling of accomplishment and effectiveness when interacting with the environment (Ng, Lonsdale, & Hodge, 2011) or, in other words, to understand what it means and what it takes to be successful (Wang & Eccles, 2013). In the context of teaching, Baumert and Kunter (2013) have said that professional competence refers to a set of knowledge areas, beliefs, and motivational variables that are empirically connected to lecturers' vocational success in terms of teaching quality and student learning gains".

Researchers have regularly found a correlation between competence and teaching quality (Degtjarjova, Lapina, & Freidenfelds, 2018). Several studies, using varied criteria, have shown clearly that a lecturer with a high level of competence activates and motivates pupils and enables their learning (Bates, Latham, & Kim, 2011; Lumpe, Czerniak, Haney, & Beltyukova, 2012; Siebert, 2006). Lecturer efficacy correlates positively with student achievement (Caprara et al., 2008; Fast et al., 2010; Guo, Piasta, Justice, & Kaderavek, 2010; Pitkäniemi, 2017).

Lecturer competence is not just a "cause" of high teaching quality but also a result of that quality. Holzberger et al.'s (2013) research into the relationship between competence and teaching quality demonstrated this. Using student ratings of teaching quality, their study considered instruction quality in terms of concepts like classroom management, cognitive activation, and individual learning support for students. The analyses revealed that teaching quality predicted lecturer competence as student perceptions of their cognitive activation levels and lecturer's classroom management ratings (Pitkäniemi, 2017). Labone (2004) and Pitkäniemi (2017) stated that perhaps the central factor in creating a lecturer's competence was not "success" in itself, but the kind of cognitive processing that lecturers identify with their "success."

Thus, based on the above discussion, the following hypothesis is posited:

H1. Competence will be positively associated with teaching quality.

3. Methodology

This study utilized quantitative research to examine the perspectives of teaching quality among university students in Yemen. A quantitative survey is useful for investigating social phenomena via statistical, mathematical, or computational techniques (Hunter & Leahey, 2008).

3.1 Sample

This study focused on the teaching quality of Yemeni universities. Undergraduate students from universities were invited to participate in this study. Statistics from the Ministry of Higher Education in Yemen show that in 2013, 29.7 million people in Yemen (40.6%) were youth aged 18- 26 years, who comprised approximately 11.88 million people (Ministry of Higher Education, 2013).

3.2 Sample size

Researchers have suggested that the total sample size should be at least 384 respondents. Cavana et al. (2001) and Hossain (2011) indicated that a minimum sample size for a margin of error of 5.0% should be 384 if the population is more than 1 million people. Therefore, a self-administered questionnaire was distributed by hand from December 1, 2019, to December 26, 2019, to 500 respondents to avoid incomplete data or missing responses from the respondents. After four weeks of data collection by hand, 415 (83%) of the surveys were returned, and 85 (17%) were either unreturned or incomplete. See Table 1

Table 1. *Summary of Questionnaires Distributed*

	Total	Per cent (%)
Distributed questionnaires	500	100
Collected questionnaires	415	83
Unreturned/incomplete questionnaires	85	17

Table 2 displays the total number of measurement items for each variable. All variables measures were based on previous studies of teaching quality using measures of competence. These included Chamoy, 2018, Black and Deci (2000), Diseth, Danielsen, and Samdal (2012), and Soenens and Vansteenkiste (2005). The study used a 5-point Likert scale with potential responses ranging from strongly disagree (1) to strongly agree (5), coded so that higher values reflected higher levels on the construct under examination unless otherwise specified.

Table 2. *Total Items of Measurement*

No.	Measurement	Total Items	Source
1	Teaching quality	16	Chamoy (2018)
2	Competence	5	Black & Deci, 2000; Diseth, Danielsen, & Samdal, 2012; Soenens & Vansteenkiste, 2005

3.3 Dependent Variable (Teaching quality)

Some researchers have been skeptical about students' ability to rate the quality of their courses and lecturers, openly questioning the reliability and validity of such ratings. A series of research studies have examined the literature on student ratings of instruction and the uses of these ratings. They have included Chamoy (2018), Krammer, Pflanzl, and Mayr (2019), Marsh and Roche (1997), and McKeachie (1997). These studies concluded that under appropriate conditions, student ratings were comparatively valid against various effective teaching indicators and that a variety of potential biases like class size, grading leniency, and workload did not affect

them. Generally, these studies favored the usage of student ratings and have concluded that questions regarding the reliability and validity of student ratings had been mostly settled. This result strengthens the claim that student ratings are valid measures of teaching effectiveness. Thus, according to Penny (2003) and Polkinghorne, Roushan, and Taylor (2017), a well-constructed and score-validated student rating instrument could be a suitable teaching quality indicator. Overall, these student ratings of teaching quality can be utilized for both formative and summative purposes.

As a result of this search, this current utilized the 16 well-known AUN-QA criteria items (ASEAN University Network-Quality Assurance) to construct a student perception teaching quality index. Some items were adapted to ensure their consistency with the criteria of Yemeni universities. This study's student rating survey used a 5-point Likert-type rating scale with answers ranging from 1 = Strongly Disagree to 5 = Strongly Agree). Table 3 below lists the items used to measure teaching quality.

Table 3. *Measurement for Teaching Quality (DV)*

Item
1. The lecturer is well prepared for his class.
2. The lecturer clearly explains the course objectives at the beginning of class.
3. The lecturer presents the course content in an organized manner.
4. The lecturer maintains a classroom atmosphere where I feel comfortable to express ideas and ask questions.
5. The lecturer uses appropriate teaching methods, which helps my learning.
6. The lecturer raises challenging questions and problems.
7. The lecturer is competent in his/her knowledge of the subject.
8. The instructor increases my understanding of the subject matter.
9. The lecturer explains the subject matter clearly.
10. The lecturer is reasonably accessible for help.
11. The lecturer provides feedback in a timely fashion.
12. The lecturer evaluates my work fairly.
13. The exams reflect material emphasized in the course.
14. Assigned work is appropriate to course level and credits.
15. The lecturer attempts to stimulate creativity.
16. The lecturer was effective overall.

Source: Adopted from (Chamoy, 2018).

3.3 Independent Variable

3.1.1 Competence

A 5-item version of the Learning Climate Questionnaire (LCQ) was utilized as previous research has done to measure student perceptions of their lecturers' competence (Black & Deci, 2000; Diseth, Danielsen, & Samdal, 2012; Soenens & Vansteenkiste, 2005). This process follows the original theoretical framework in

SDT, which utilized a narrow conceptualization of motivating style that focused only on lecturer competence (Deci, Schwartz, Sheinman, & Ryan, 1981). The 5 items that were chosen used a 5-point Likert scale with potential answers ranging from 1 = Strongly Disagree to 5 = Strongly Agree. These items were adopted from Standage, Duda, and Ntoumanis (2006) and Van den Broeck et al. (2010). Questions selected from those studies had some modifications to adapt them to the current research. Table 4 shows the items used to measure competence.

Table 4. *Measurement of Competence*

	Items
1.	My lecturer is a master of his tasks at his job
2.	I doubt whether my lecturer is able to execute his job properly.
3.	My lecturer is good at the things he does in his job
4.	I am satisfied with my lecturer's performance.
5.	My lecturer was pretty skilled in classroom activities.

Source: Adopted from Standage et al. (2006) and Van den Broeck et al. (2010).

4. Findings

4.1 Reliability Analysis

The Cronbach's alpha coefficient values were checked for the reliability test and measured the consistency and stability of the variables and internal consistency confirmation of the scales. Sekaran and Bougie (2016) pointed out a value of Cronbach's alpha closer to 1.00 indicated better data reliability. Whereas Hair et al. (2007) suggested the minimum acceptable coefficient alpha value in this study for the reliability test was 0.7. Table 5 shows that the Cronbach coefficient alpha values of all the variables were more than 0.7.

Table 5. *Summary of Reliability Test*

No.	Study Variables	No. of Item	Cronbach's Alpha	Remarks
1	Teaching Quality	16	0.896	Excellent
2	Competence	5	0.703	Good

4.2 Correlation Analysis

The variables of teaching quality and competence were conducted using correlation analysis. The Pearson correlation values represent the correlation coefficient. According to Hair et al. (2006), values close to + 1 indicate a stronger association. If the coefficient value is more than 0.5, it represents a strong correlation, and a value of less than 0.2 is considered a weak correlation. As the coefficient having a value between 0.2 to 0.5 indicates a medium correlation. Table 1.6 presents the results from Pearson analysis. The results showed a significant relationship between teaching quality and competence ($r=0.565$, $p<0.01$).

Table 6. *Relationship between Variables*

	TQ	COMP	AUT	COMM
Teaching quality	1.00			
Competence	.565	1.00		

4.3 Regression Analysis

The effect of independent variables on the dependent variables was measured with the use of regression analysis. The study's hypothesis was tested with multiple regression analysis. Regression analysis is usually

used to serve such a purpose. As shown in Table 4.6, the standardized coefficient was 0.334 for competence with an F value of 0.000, which is significant. Multiple regression analysis is the most extensively used multivariate technique to predict and/or explain variance (Hair et al. 2006). The Durbin-Watson value of more than one (1.942) indicated no autocorrelation problem of error terms existed. Table 7 shows that competence was significant, t = 7.494, p = 0.000. In conclusion, competence had a significant influence on teaching quality. Table 7 shows the regression coefficients (R) of the three independent variables with teaching quality as the dependent variable. The independent variables were significant at $p < 0.05$. Thus, H1 was supported.

Table **7**. *Result of Regression Analysis Dependent Variable: Teaching Quality*

Variables	Beta	t-Ratio	Sig.t
Competence	0.334	7.494	0.000
R Square = 0.481			

5. Discussion and Conclusion

The question of this study was what the relationship between competence and teaching quality in Yemeni universities? The findings show a direct positive and significant effect of competence on teaching quality. This means that lecturer competence will be rated as high quality with the teaching if the competence is high. On the other hand, teaching quality will be decreased if competence is weak. The present study's finding is similar to previous studies (Degtjarjova et al., 2018; Holzberger et al., 2013; Guo et al., 2014). Previous studies have also shown significant evidence on the direct and positive relationships between competence and teaching quality. The findings highlight the critical role played by students' evaluation of lecturer competence in enhancing teaching quality. This study provides some support for Kunter et al. (2013), who found that all aspects of lecturers' professional competence made a specific contribution to the prediction of educational quality. Moreover, lecturer competence leads to a stronger teaching quality (Fauth et al., 2018).

5.1 Limitations

When interpreting the results of this study, limitations have to be considered. As university teaching quality measurement methods and programs in Yemeni universities context are new, additional time is necessary to assess the expected consequences drawn in this study.

Second, this study collected data from a developing country in exceptional circumstances, the ongoing Yemeni war.

5.2 Recommendations for Future Research

Examination of the relation between the teaching quality and the lecturers' evaluation constitutes future research. Similar research should be conducted in other countries to assess whether teaching quality is measured in the same way. Thus, data should be gathered in other developing countries and developed countries where contextual differences are more evident. Namely, researchers have raised concerns that factors found to affect teaching quality in developing countries may not have the same effect in developed countries due to profound differences in the educational environment such as lecturer education, provision of resources (Anderson, Ryan, & Shapiro, 2013; Howie, 2005; Legotlo, Maaga, & Sebego, 2002).

Future research on teaching quality in higher education should examine the complex relationships between proxies for teaching quality and actual teaching quality. Particular attention should be paid to how definitions of effective teaching evolve due to changing student needs, new modes of delivery, changing employer needs, and technological innovation. In this instance, factors related to students' evaluation of lecturer need to be revisited by taking into account the distance education paradigm (Lowenthal, Bauer & Chen, 2015),

Relatively little research has examined academics' understanding and perceptions of teaching excellence, and further research in this area is sorely needed. It would be beneficial to look at how academics and students from the same institutions and courses perceive teaching quality and excellence and how these

perceptions may change over time. There is also the issue of shifting thresholds and how these can be accommodated in systems designed to measure excellence.

This current research studied the perceptions of students from universities about competence. However, it did not capture the perceptions of university staff and professionals or their level of satisfaction. Staff and professionals play a critical role in the success of the process of education. Therefore, their perceptions and level of satisfaction may directly affect the teaching quality in general educational performance.

6. Conclusion

Identifying the factors that drive teaching quality is critical in enabling Yemeni universities to support necessary insights for lecturers, universities, higher educational institutions, and policymakers in higher education and students. The findings of this study have theoretical and practical implications for academics and organization practitioners. First, this study utilized a competence variable in teaching quality. Based on Self-determination Theory (SDT), the findings determined that competence positively correlates with teaching quality. The hypothesis was accepted, and this indicates the robustness of the model used. The results will contribute to the development of follow-up studies in the area of teaching quality in universities.

7. Acknowledgments

This study supported from Asherah Foundation Scholarship 2020, which is gratefully acknowledged.

References

i. *Ahmed, H., Ahmed, M., & Siddiek, A. G. (2018). Strategic quality management in the Arab higher education institutes: A descriptive & analytical study. International Journal of Business and Social Science, 3(24). Available at SSRN: https://ssrn.com/abstract=3181721*

ii. *Alabidi, S. (2014). Educational indicators of the Republic of Yemen: Stages and various types.*

iii. *Aligolbandi, K., Mohammadalizadeh, P., Amuei, F., Ghahrani, N., Asghar, A., & NadiGhara, A. H. (2017). Prediction of Active Learning by Evaluating the Components of Competency and Teaching Quality in the Students of Mazandaran University of Medical Sciences. Journal of Medical Education, 10(27), 124-140.*

iv. *Alshohybe, N., Al-Raimi, M., & Almutawkkil, A. (2016). Evaluation of quality assurance implementation in Sana'a University: The Computer Center as a case. IRACST-International Journal of Computer Science and Information Technology & Security (IJCSITS), ISSN, 2249-9555.*

v. *Anderson, L., Ryan, D. W., & Shapiro, B. J. (Eds.). (2013). The IEA classroom environment study (Vol. 4). Elsevier.*

vi. *Avasilcai, S., & Hutu, C. A. (2003). A quality assurance system for post-graduate education. Presented at 3rd Research/Expert Conference with International Participations "QUALITY" 2003, Zenica, B&H, November 13-14.*

vii. *Bassi, F., Clerci, R., & Aquario, D. (2017). Students' evaluation of teaching at a large Italian university: Measurement scale validation. Electronic Journal of Applied Statistical Analysis, 10(1), 93-117.*

viii. *Bates, A. B., Latham, N., & Kim, J. A. (2011). Linking preservice teachers' mathematics Self-Efficacy and mathematics teaching efficacy to their mathematical performance. School Science and Mathematics, 111(7), 325-333.*

ix. *Baumert, J., & Kunter, M. (2013). The COACTIV model of teachers' professional competence. In Cognitive activation in the mathematics classroom and professional competence of teachers (pp. 25-48). Springer, Boston, MA.*

x. *Black, A. E., & Deci, E. L. (2000). The effects of instructors' autonomy support and students' autonomous motivation on learning organic chemistry: A Self-determination Theory perspective. Science Education, 84(6), 740-756.*

xi. *Caprara, G. V., Fida, R., Vecchione, M., Del Bove, G., Vecchio, G. M., Barbaranelli, C., & Bandura, A. (2008). Longitudinal analysis of the role of perceived self-efficacy for self-regulated learning in academic continuance and achievement. Journal of Educational Psychology, 100(3), 525-534.*

xii. *Cavana, R. Y., Delahaye, B. L., & Sekaran, U. (2001). Applied business research: Qualitative and quantitative methods. John Wiley & Sons, Inc.*

xiii. *Chamoy, W. (2018). Evaluation of the psychometric quality and validity of a student survey of instruction in Bangkok University, Thailand [Doctoral dissertation, University of Pittsburgh].*

xiv. *Chetty, R., Friedman, J. N., & Rockoff, J. E. (2014). Measuring the impacts of teachers II: Teacher value-added and student outcomes in adulthood. American Economic Review, 104(9), 2633-2679.*

xv. *Claire, S., Marian, H., Deborah, N., & Stenius, S. L. (2014). OECD reviews of evaluation and assessment in education: Northern Ireland, United Kingdom (Vol. 2223, No. 947). OECD Publishing.*

xvi. *Cuthbert, R. (2010). Students as customers. Higher Education Review, 42(3), 3-25.*

xvii. *Dahl, D. W., & Smimou, K. (2011). Does motivation matter? Managerial Finance, 37(7), 582-609.*

xviii. *Deci, E. L., Schwartz, A. J., Sheinman, L., & Ryan, R. M. (1981). An instrument to assess adults' orientations toward control versus autonomy with children: Reflections on intrinsic motivation and perceived competence. Journal of Educational Psychology, 73(5), 642-650.*

xix. *Degtjarjova, I., Lapina, I., & Freidenfelds, D. (2018). Student as stakeholder: Voice of customer in higher education quality development. Маркетинг і менеджмент інновацій, 2, 388-398.*

xx. *Díaz-Méndez, M., & Gummesson, E. (2012). Value co-creation and university teaching quality: Consequences for the European Higher Education Area (EHEA). Journal of Service Management, 23(4), 571-592.*

xxi. *Dinham, S. (2013). The quality teaching movement in Australia encounters difficult terrain: A personal perspective. Australian Journal of Education, 57(2), 91-106.*

xxii. *Diseth, Å., Danielsen, A. G., & Samdal, O. (2012). A path analysis of basic need support, self-efficacy, achievement goals, life satisfaction and academic achievement level among secondary school students. Educational Psychology, 32(3), 335-354.*

xxiii. *Fast, L. A., Lewis, J. L., Bryant, M. J., Bocian, K. A., Cardullo, R. A., Rettig, M., & Hammond, K. A. (2010). Does math self-efficacy mediate the effect of the perceived classroom environment on standardized math test performance? Journal of Educational Psychology, 102(3), 729-740.*

xxiv. *Fauth, B., Decristan, J., Rieser, S., Klieme, E., & Büttner, G. (2014). Student ratings of teaching quality in primary school: Dimensions and prediction of student outcomes. Learning and Instruction, 29, 1-9.*

xxv. *Goos, M., & Salomons, A. (2017). Measuring teaching quality in higher education: assessing selection bias in course evaluations. Research in Higher Education, 58(4), 341-364.*

xxvi. *Guo, Y., Piasta, S. B., Justice, L. M., & Kaderavek, J. N. (2010). Relations among preschool teachers' self-efficacy, classroom quality, and children's language and literacy gains. Teaching and Teacher Education, 26(4), 1094-1103.*

xxvii. *Guolla, M. (1999). Assessing the teaching quality to student satisfaction relationship: Applied customer satisfaction research in the classroom. Journal of Marketing Theory and Practice, 7(3), 87-97.*

xxviii. *Hair, J. F. Jr., Money, A. H., Samouel, P., & Page, M. (2007). Research methods for business. England: John Wiley & Sons Ltd.*

xxix. *Hair, J. F., Tatham, R. L., Anderson, R. E., & Black, W. (2006). Multivariate data analysis (Vol.6). Upper Saddle River, NJ: Pearson Prentice Hall.*

xxx. *Hammonds, F., Mariano, G. J., Ammons, G., & Chambers, S. (2017). Student evaluations of teaching: improving teaching quality in higher education. Perspectives: Policy and Practice in Higher Education, 21(1), 26-33.*

xxxi. *Hanushek, E. A., & Rivkin, S. G. (2006). Teacher quality. Handbook of the Economics of Education, 2, 1051-1078.*

xxxii. *Hanushek, E. A., Kain, J. F., O'Brien, D. M., & Rivkin, S. G. (2005). The market for teacher quality (No. w11154). National Bureau of Economic Research.*

xxxiii. *Holzberger, D., Philipp, A., & Kunter, M. (2013). How teachers' self-efficacy is related to instructional quality: A longitudinal analysis. Journal of Educational Psychology, 105(3), 774.*

xxxiv. *Hossain, D. M. (2011). Qualitative research process. Postmodern Openings, 2(7), 143-156.*

xxxv. *Houston, D. (2008). Rethinking quality and improvement in higher education. Quality Assurance in Education, 16(1), 61-79.*

xxxvi. *Howie, S. J. (2005). Contextual factors at the school and classroom level related to pupils' performance in mathematics in South Africa. Educational Research and Evaluation, 11(2), 123-140.*

xxxvii. *Hunter, L., & Leahey, E. (2008). Collaborative research in sociology: Trends and contributing factors. The American Sociologist, 39(4), 290-306.*

xxxviii. *Ip, R. K., Iong, S. I. F., Wu, M. X. Y., & Wang, S. S. Y. (2017). A preliminary study on teaching quality assessment from the perspective of "students as customers." In 2017 IEEE 6th International Conference on Teaching, Assessment, and Learning for Engineering (TALE), (pp. 444-448). IEEE.*

xxxix. *Jain, R., Sinha, G., & Sahney, S. (2011). Conceptualizing service quality in higher education. Asian Journal on Quality, 12(3), 296-314.*

xl. *Javed, T. (2017). Effect of classroom environment, motivation and teacher feedback on academic achievement of secondary school students in Pakistan [Doctoral dissertation, Mohi-Ud-Din Islamic University Nerian Sharif Aj&K].*

xli. *Karthikeyan, P., & Vasuki, S. (2016). Hybrid approach of efficient decision-based algorithm and fuzzy logic for the removal of high density salt and pepper noise in images. Journal of Circuits, Systems and Computers, 25(10), 1650130.*

xlii. *Kim, Y. H., & Kim, Y. E. (2010). Korean early childhood educators' multi-dimensional teacher self-efficacy and ECE center climate and depression severity in teachers as contributing factors. Teaching and Teacher Education, 26(5), 1117-1123.*

xliii. *Krajewski, L. J., Malhotra, M. K., Ritzman, L. P. (2010). Operations management: Processes and supply chains. Upper Saddle River, New Jersey: Pearson.*

xliv. *Krammer, G., Pflanzl, B., & Mayr, J. (2019). Using students' feedback for teacher education: measurement invariance across pre-service teacher-rated and student-rated aspects of quality of teaching. Assessment & Evaluation in Higher Education, 44(4), 596-609.*

xlv. *Kunter, M., Klusmann, U., Baumert, J., Richter, D., Voss, T., & Hachfeld, A. (2013). Professional competence of teachers: Effects on instructional quality and student development. Journal of Educational Psychology, 105(3), 805-820.*

xlvi. *Labone, E. (2004). Teacher efficacy: Maturing the construct through research in alternative paradigms. Teaching and Teacher Education, 20(4), 341-359.*

xlvii. *Legotlo, M. W., Maaga, M. P., & Sebego, M. G. (2002). Perceptions of stakeholders on causes of poor performance in Grade 12 in a province in South Africa. South African Journal of Education, 22(2), 113-118.*

xlviii. *León, J., Medina-Garrido, E., & Ortega Viera, M. (2018). Teaching quality: High school students' autonomy and competence. Psicothema, 30(2), 218-223.*

xlix. *Lokman, H. F., Yusoff, N. M. R. N., Khalid, F., & Nasri, N. M. (2018). The feedback of using Edmodo Application in teaching and learning of moral education in secondary school. International Journal of Research in Progressive Education and Development, 7(4), 246-254.*

l. *Lowenthal, P., Bauer, C., & Chen, K. Z. (2015). Student perceptions of online learning: An analysis of online course evaluations. American Journal of Distance Education, 29(2), 85-97.*

li. *Lumpe, A., Czerniak, C., Haney, J., & Beltyukova, S. (2012). Beliefs about teaching science: The relationship between elementary teachers' participation in professional development and student achievement. International Journal of Science Education, 34(2), 153-166.*

lii. *Marie, C. D., Cono, M., & Fernandes, P. O. (2016). Student satisfaction in higher education: A Portuguese case study. Revista Ciencias Administrativas Teoría y Praxis, 2, 44-55.*

liii. *Marsh, H. W., & Roche, L. A. (1997). Making students' evaluations of teaching effectiveness effective: The critical issues of validity, bias, and utility. American Psychologist, 52(11), 1187.*

liv. *Masuwai, A. (2019). Quality learning spaces, resources, technologies and constructive alignment element in teaching and learning. Sains Humanika, 11(1), 29-41.*

lv. *McKeachie, W. J. (1997). Student ratings: The validity of use. American Psychologist, 52(11), 1218–1225.*

lvi. *Meymand, F. Z., & Abdoli, A. (2015). Teaching quality in higher education: Evidence from University of Applied Science and Technology of South-Khorasan.*

lvii. *Mofreh, S. A. M., Ghafar, M. N., Omar, A. H. H., & Ma'ruf, A. (2014). Teaching appraisal in higher education institutions, Yemen. In Proceedings of The 1st Academic Symposium on Integrating Knowledge (The 1st ASIK): Integrating Knowledge with Science and Religion (pp. 36-43). Ibnu Sina Institute for Fundamental Science Studies.*

lviii. *Mohaideen, A. Y. M. A., & Aizuddin, A. N. (2017). Knowledge, Attitudes, and Practices of Students towards TQM in High Institute of Health Sciences in Sana'a, Yemen. International Journal of Public Health Research, 7(2), 852-859.*

lix. *Muthanna, A., & Sang, G. (2018). Brain drain in higher education: Critical voices on teacher education in Yemen. London Review of Education, 16(2), 296-307.*

lx. *Nasser, F., & Fresko, B. (2002). Faculty views of student evaluation of college teaching. Assessment & Evaluation in Higher Education, 27(2), 187-198.*

lxi. *Ng, J. Y., Lonsdale, C., & Hodge, K. (2011). The Basic Needs Satisfaction in Sport Scale (BNSSS): instrument development and initial validity evidence. Psychology of Sport and Exercise, 12(3), 257-264.*

lxii. *Nye, B., Konstantopoulos, S., & Hedges, L. V. (2004). How large are teacher effects? Educational evaluation and policy analysis, 26(3), 237-257.*

lxiii. *Oliver, R. (2003). Exploring benchmarks and standards for assuring quality online teaching and learning in higher education. In Proceedings of 16th Open and Distance Learning Association of Australia Biennial Forum (pp.79-90). Canberra, October 1-3.*

lxiv. *Penny, A. R. (2003). Changing the agenda for research into students' views about university teaching: Four shortcomings of SRT research. Teaching in Higher Education, 8(3), 399-411.*

lxv. *Pitkäniemi, H. (2017). A teacher's practical theories, self-efficacy, and emotions-What connections do they have, and how can they be developed? Nordisk Tidskrift för Allmän Didaktik, 3(1), 2-23.*

lxvi. *Polkinghorne, M., Roushan, G., & Taylor, J. (2017). Evaluating student learning gain: An alternative perspective. Presented at the Higher Education Academy (HEA) Surveys Conference 2017, Manchester Conference Centre, England, May 11.*

lxvii. *Prakash, G. (2018). Quality in higher education institutions: insights from the literature. The TQM Journal, 30(6), 732-748.*

lxviii. *Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005). Teachers, schools, and academic achievement. Econometrica, 73(2), 417-458.*

lxix. *Robinson, T. E., & Hope, W. C. (2013). Teaching in Higher Education: Is There a Need for Training in Pedagogy in Graduate Degree Programs?. Research in Higher Education Journal, 21, 1-11.*

lxx. *Sala-i-Martin, X., & Schwab, K. (Eds.). (2011). The global competitiveness report: 2011-2012. World Economic Forum.*

lxxi. *Sekaran, U., & Bougie, R. (2016). Research methods for business: A skill-building approach. John Wiley & Sons.*

lxxii. *Shaabani, V. B., & Hossaingholizadeh, R. (2006). Evaluation of college teaching qualities. Quarterly Journal of Research and Planning in Higher Education, 12(1), 1-21.*

lxxiii. *Shagrir, L. (2015). Factors affecting the professional characteristics of teacher educators in Israel and in the USA: a comparison of two models. Compare: A Journal of Comparative and International Education, 45(2), 206-225.*

lxxiv. *Siebert, M. C. (2006). An examination of students' perceptions of goal orientation in the classroom and teachers' beliefs about intelligence and teacher efficacy [Doctoral dissertation, Kansas State University].*

lxxv. *Soenens, B., & Vansteenkiste, M. (2005). Antecedents and outcomes of self-determination in 3 life domains: The role of parents' and teachers' autonomy support. Journal of Youth and Adolescence, 34(6), 589-604.*

lxxvi. *Standage, M., Duda, J. L., & Ntoumanis, N. (2006). Students' motivational processes and their relationship to teacher ratings in school physical education: A Self-determination Theory approach. Research Quarterly for Exercise and Sport, 77(1), 100-110.*

lxxvii. *Sultan, P., & Yin Wong, H. (2014). An integrated-process model of service quality, institutional brand and behavioural intentions: The case of a university. Managing Service Quality, 24(5), 487-521.*

lxxviii. *Tang, K. H., & Zairi, M. (1998). Benchmarking quality implementation in a service context: A comparative analysis of financial services and institutions of higher education: Part II. Total Quality Management, 9(7), 539-552.*

lxxix. *Tøndel, M., Kiønig, L., Schult, I., Holen, S., & Vold, T. (2018, July). Students as co-developers of courses in higher education. In ICEL 2018 13th International Conference on e-Learning (p. 448-453). Academic Conferences and Publishing Limited.*

lxxx. *Van den Broeck, A., Vansteenkiste, M., De Witte, H., Soenens, B., & Lens, W. (2010). Capturing autonomy, competence, and relatedness at work: Construction and initial validation of the Work-related Basic Need Satisfaction scale. Journal of Occupational and Organizational Psychology, 83(4), 981-1002.*

lxxxi. *Wallace, T. L., Kelcey, B., & Ruzek, E. (2016). What can student perception surveys tell us about teaching? Empirically testing the underlying structure of the tripod student perception survey. American Educational Research Journal, 53(6), 1834-1868.*

lxxxii. *Wang, M. T., & Eccles, J. S. (2013). School context, achievement motivation, and academic engagement: A longitudinal study of school engagement using a multidimensional perspective. Learning and Instruction, 28, 12-23.*

lxxxiii. *Watty, K. (2006). Want to know about quality in higher education? Ask an academic. Quality in Higher Education, 12(3), 291-301.*

lxxxiv. *World Bank. (2011). World development report 2011: Conflict, security, and development. World Bank.*

lxxxv. Zeichner, K., Payne, K. A., & Brayko, K. (2015). Democratizing teacher education. Journal of Teacher Education, 66(2), 122-135.

lxxxvi. Zhang, S. (2017). A model of the teaching quality evaluation based on fuzzy analytic hierarchy process. Revista de la Facultad de Ingeniería, 32(7), 447-453.