

# **Trials and Tribulations of implementing Total Quality Management (TQM) in Educational Institutions: An analysis of Published Research Articles through a systematic review of Literature from 2005-2019**

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## **Abstract**

Total Quality Management (TQM) is believed to be one of the most important tools that can be implemented to ensure quality and competitive advantage in the education sector. Due to this, establishing the various challenges that are encountered in its implementation is very crucial as a way of devising strategies to enhance the quality of education. This systematic review was conducted to identify the challenges to TQM, the education sector which faces the most challenges, and the most common research design/approaches adapted in investigating the challenges to TQM implementation through a systematic review of the literature. A research strategy was performed on the selected articles published in peer-reviewed journals between 2005 and 2019. Appropriate databases namely, Emerald Insight, ERIC, and Elsevier were searched, and 21 peer-reviewed research papers were identified through a screening process and were finally reviewed for this study. The most prevalent challenges to the successful implementation of TQM, common research design/approaches adapted in investigating challenges to TQM, and the educational sector with the most prevalent challenges to TQM implementation were identified. The review was limited to only three databases namely Emerald Insight, ERIC, and Elsevier, and the range between 2005 to 2019. The study was concluded with a set of recommendations for future researchers to draw on while developing better precision and generalizations.

**Keywords: Trials, Tribulations, TQM implementation, Educational institutions, Systematic review of the literature, Published Research articles**

## **Introduction**

It is has become common knowledge that the quality of education is a major determinant of the quality of human resources responsible for the growth and economic development of any country (Howarth & Greenwood, 2017; Kado et al., 2016). In this regard, the major role of all educational institutions is to deliver quality education whose sole purpose is to produce a highly

qualified, skilled, and competent workforce to serve in the labor market, business, and industry to contribute to the national growth and development.

While striving to enhance quality in education institutions, several developments such as increasing student enrolments due to massification of education, marketization of education, competition amidst reduced state funding for public higher education have all come up to influence the delivery of quality education in an educational institution (Aquilani et al., 2017; Nasim et al., 2020). As such, in this situation, pressure from various stakeholders such as politicians, students, parents, employers have mounted on the management of these education institutions in terms of providing increased demand for accountability. Due to this, the educational institutions decided to implement TQM which originated from industries and the business sector to improve the quality of education as their main priority (Sahney et al., 2008; Manatos et al., 2017). Similarly, according to Heras et al. (2008) and Lam et al. (2012). TQM has been considered as a significant strategy for improving the quality of education as it concerns continuous improvement, the involvement of everyone to satisfy the customer through meeting their expectations.

Given the ever-increasing competitive and dynamic environment in which education institutions currently operate, and the need to assure and enhance the quality of education in educations through applying TQM has come with several challenges. In this situation, a systematic review of literature on the various challenges to TQM implementation in educational institutions is worth to be conducted to devise solutions to improve its application. Therefore, the major aim of this systematic review was to identify the most common challenges to TQM implementation in educational institutions. Furthermore, the study also identified the most common research approaches/designs applied in studying challenges to TQM implementation as well as the education sector with the most prevalent challenges to TQM. The review was set to answer the following questions: 1. What are the most common challenges to TQM in educational institutions? 2. What are the most common research approaches/designs applied in studying challenges to TQM implementation in educational institutions? 3. In which education sector are the challenges to TQM more prevalent? The next section presents the methodology.

## **2.0 Methodology**

This section presents the processes by which the study was conducted. These include inclusion criteria in the studies are identified following some specific guidelines set by the researcher; the exclusion criteria which consists of the conditions that are put forward to exclude studies that do not meet the inclusion criteria and finally search and selection criteria which shows the databases and the papers identified, excluded, and included in the study.

### **2.1 Inclusion criteria**

The systematic review of the literature was limited to only peer-reviewed journal articles written in English. A study was included if it met all the four inclusion criteria:

- The study was conducted in the education sector
- The study should be on challenges faced in TQM implementation in education institutions
- The study discussed TQM issues in education.
- The study provided empirical evidence.

### **2.3 Exclusion criteria**

- Study not addressing TQM in the education sector
- Study not discussing challenges on TQM implementation
- Are theses
- Study not providing empirical studies

### **2.4 Search and selection of the studies**

While conducting the review, three search engines namely emerald insight, ERIC, and Elsevier were used to identify articles written on challenges to successful TQM implementation published in peer-reviewed journals. The reason for using the three mentioned databases is that they are well-established, multi-disciplinary research platforms, holding a wide variety of peer-reviewed journals, and are being kept updated regularly. Secondly, they ensure that all relevant papers are included since it is possible that using a single database may omit relevant research. The major keywords employed in the search were: TQM in education institutions, challenges to TQM implementation, TQM practices in educational institutions. The process of search and selection of the studies included in the study is shown in the following figure 1.

**Figure 1 summary of studies included in the study**

Author	Study	Sector	Findings of the study	Research Design	Country
1. Suleman & Gul (2015)	Challenges to Successful Total Quality Management Implementation in Public Secondary Schools: A Case Study of Kohat District, Pakistan	Secondary education	Ineffective leadership; lack of funding and resources; insubordination of workforce; lack of management commitment; poor and ineffective planning; political interference; and poor teachers' status and morale.	Quantitative	Pakistan
2. Zabadi (2013)	Implementing Total Quality Management (TQM) on the Higher Education Institutions – A Conceptual Model.	Higher education	Leadership with lack necessary authority, rigid department model, inter-departmental competition for resources, and lack of market focus are the cultural and organizational reasons that make it difficult to tune in with TQM transformation, ambiguity in customer identification is also creates hurdles in TQM implementation, ambiguity in customer identification is also creating hurdles in TQM implementation.	Quantitative	Saudi Arabia
3. Rosa et al. (2012)	Implementing Quality Management Systems in Higher Education Institutions, Quality Assurance, and Management	Higher education	The main challenge is that the terms such as product, client, empowerment, or even strategy, reengineering do not easily correspond in higher education institutions, lack of commitment from the parties involved with the education system, especially the top management and teachers.	Quantitative	Portugal
4. Kosgei (2014)	Challenges Facing the Implementation of Total Quality Management in Secondary Schools: A Case	Secondary school	Lack of commitment by the management and some workforce, school's organizational culture, poor documentation, inadequate training of staff, and ineffective	Quantitative	Kenya

	of Eldoret East District, Kenya.		communication.		
5. Maria João Rosa & Amaral (2007)	A Self-Assessment of Higher Education Institutions from the Perspective of the TQM Excellence Model	Higher education	Absence of effective communication channels; the problem in measuring higher education institutions results; the co-existence of multiple purposes and objectives for higher education institutions; the emphases in the individualism and significant degree of internal competition; the bureaucratic decision-making process; and the lack of strong leadership, highly committed to the ideas and principles it wants to apply and capable of involving all the institution's members.	Quantitative	Portugal
6. Ramdass & Nemavhola (2018)	Quality practices: an open distance learning perspective	Higher education	Challenges include Policing Practices, understanding the importance of Quality; Policies; Funding; Workload, ICT, and Trust.	Qualitative	South Africa
7. Ali & Shastri (2010)	Implementation of Total Quality Management in Higher Education	Higher education	Vagueness in customer identification	Quantitative	Jordan
8. Kigozi (2019)	Challenges to the successful implementation of TQM in education institutions. A case of selected PTTCs in Uganda.	Tertiary education	lack of leadership commitment, poor and ineffective leadership, lack of funding and resources, lack of an integrated model of TQM, poor teacher status and morale, lack of cooperation among the staff, resistance against change by the staff, lack of proper training of staff on TQM, the ambiguity of TQM implementation, misconception among PTTC staff about TQM implementation.	Quantitative	Uganda
9. Mobegi et al. (2010)	Secondary school headteachers 'quality	Secondary education	Insufficient physical, learning, and instructional materials	Quantitative	Kenya

	assurance strategies and challenges in Gucha district				
10. Alzafari & Kratzer (2019)	Challenges of implementing quality in European Higher education: an expert perspective.	Higher education	Organization challenges that include quality system, educational system, and external stakeholders; (2) implementation challenges including execution, competency and funding challenges; (3) leadership and quality culture Challenges.	Qualitative	U. K
11. Mishra & Pandey (2013)	To investigate the barriers to TQM implementation in higher education.	Higher education	Poor curriculum design, lack of funds and resources, the resistance of employees towards change.	Quantitative	India
12. Akinlolu et al. (2010.)	TQM implementation challenges: a case study of a building maintenance department of an institution of higher learning	Higher education	Lack of human and financial resources, lack of financial and human resources, Resistance from top management and supervisors.	Quantitative	South Africa
13. Talib et al. (2011)	Analysis of interaction among the barriers to total quality management implementation using an interpretive structural modeling approach	HEI	Lack of top lack of coordination between departments high turnover at management level, lack of continuous improvement culture, employees' resistance to change.	Quantitative	India
14. Sohel-Uz-Zaman (2016)	Implementing Total Quality Management in Education: Compatibility and Challenges	HEI	Lack of top management commitment, resistance to quality process improvement, the absence of effective communication channels.	Qualitative	Bangladesh
15. Ravindran & Kamaravel (2016)	Total quality management in education: prospects, issues, and challenges	HEI	Insufficient trust between departments and faculty members' low confidence level of ability to manage the process of TQM.	Qualitative	India
16. Ariff et al.	Total Quality Management	HEI	Difficulties to measure a complex range of	Qualitative	Malaysia

(2007)	Implementation in Higher Education; Concerns and Challenges Faced by the Faculty		performance indicators, The misfit of the focus between the University’s concerns and the focus of QA, The tradeoff between creativity and rigidity in teaching and students’ assessment; Cohesive teamwork and synergy amongst academic staff of different panels (specialization) and different faculties with the program specification; The intricacy between external decisions on student’s enrolment and resources capability of the faculty; Limited involvement of SH; and Resources, Human resource development, and Research.		
17. Alruwaili (2013)	Total Quality Management in Education Directorates in Saudi Arabia: Contrasting Provincial Case Studies	HEI	Bureaucratic restrictions, Lack of education and inadequate training, the absence of an adequate reward system, poor workplace relations, and corruption and malpractice.	Qualitative	Saudi Arabia
18. Mohammed et al. (2014)	Assessing the challenges to the implementation of total quality management in the development of tertiary education in Ghana case study of tamale polytechnic	HEI	The attitude of Staff, Infrastructural Constraints, Management commitment, Financial Constraints, and No Response.	Quantitative	Ghana
19. Sajjad & Syed (2017)	Analysis of Challenges to Total Quality Management Implementation in FGEIs (C/G) in Pakistan	HEI	Not linking the promotion and increments in pay with the achievement of quality goals” followed by “time constraints” and “insufficient resources to implement TQM”.	Quantitative	Pakistan
20. Hussein et al. (2017)	Challenges and Prospects of Implementing ISO	HEI	Lack of awareness, Resistance to change, Terminology used in ISO 9001, Existence	Quantitative	Lebanon

	9001:2015 in Lebanese Higher Education Institutions		of accreditation constraints, lack of commitment of top management, time management, and Resources availability, and the lack of awareness and the resistance to change.		
21. Mensah et al. (2012)	Total Quality Management in Ghana: Critical Success Factors and Model for Implementation of a Quality Revolution	HEIs	Management resistance, employee resistance, and resource paucity.	Qualitative	Ghana

**Source: literature review**

From the initial search from the databases, a total of 350 papers were identified as shown in figure 1. The papers were subjected to the first screening which eliminated 100 papers on grounds of being duplicates, theses, and being literature reviews, this resulted in 250 papers. These were then screened for the second time in which 229 studies were removed because they were not in English, not on TQM in education, not written on education, and not empirical studies and this resulted in a total of 21 papers which were included in the study. The included study and their characteristics are shown in table 2.

### 3.0 Findings of the study

This subsection presents findings of the analysis of the papers citing challenges to the implementation of TQM in educational institutions.

#### 3.1 Characteristics of included papers

Characteristics of the included studies are described in table 2 which shows their summary according to the country, research design/approach, and education sector.

**Table 2 summary of the included studies according to the country, research design/approach, and education sector.**

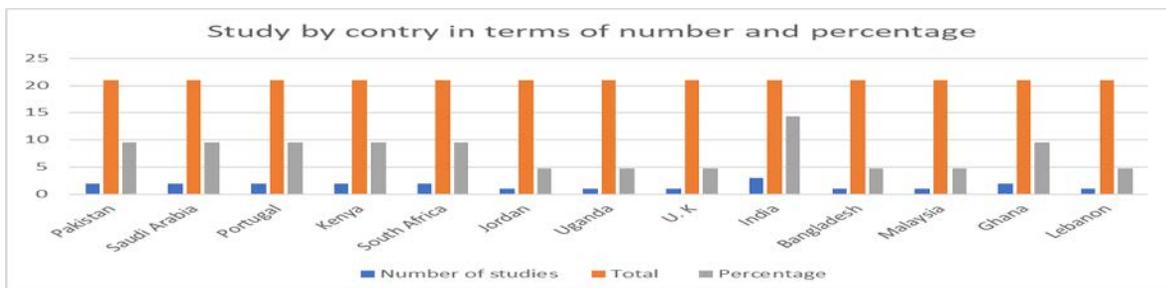
Characteristic	Number of studies	Total	Percentage
<b>1. Study (s) by Country</b>			
Pakistan	02	21	9.52
Saudi Arabia	02	21	9.52
Portugal	02	21	9.52
Kenya	02	21	9.52
South Africa	02	21	9.52
Jordan	01	21	4.76
Uganda	01	21	4.76
U. K	01	21	4.76
India	03	21	14.3
Bangladesh	01	21	4.76
Malaysia	01	21	4.76
Ghana	02	21	9.52
Lebanon	01	21	4.76
<b>2. Research Design</b>			
Qualitative	05	21	23.81
Quantitative	16	21	76.19
<b>3. Education sector</b>			
Secondary education	03	21	14
Higher education	17	21	81
Tertiary education	01	21	05

Source: a literature review

### 3.2 Study per country

From the geographical location perspective, the review indicates that most of the studies (42.84%) were conducted in India, 9.52% in Ghana, South Africa, Kenya, Pakistan, Saudi Arabia, and Portugal while 4.76% were conducted in Lebanon, Bangladesh, Malaysia, Jordan, and Uganda. The summary of the study by country regarding the investigation of challenges to TQM is shown in the following figure 2.

Figure 2 study by country in terms of number and percentage



Source: a literature review

### 3.3 Research Design

It is found out that the most applied research design/approach in investigating TQM challenges in education institutions is quantitative approach/design (76.19%) and while 23.81% applied qualitative research design/approaches and no study applied mixed methods designs/approach. The summary of the research design/approach applied in the investigation of challenges to TQM implementation in educational institutions. The summary of research designs/approaches applied in investigating challenges to TQM is shown in the following figure 3.

Figure 3 research design/approach applied in investigating challenges to TQM

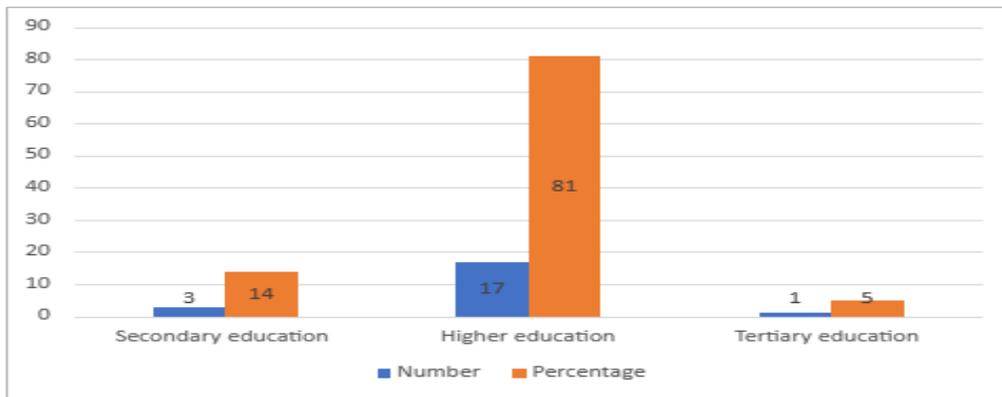


Source: a literature review

### 3.5 Number of studies per Sector

The review indicated that (17) 81% of the studies investigating challenges to TQM implementation were conducted in higher education, (03)14% in secondary education, and (1) 5% in tertiary education institutions, and no study was identified in primary education. The summary of studies per sector is shown in figure 4.

**Figure 4 studies per education sector**



Source: a literature review

### 3.6 Challenges to TQM implementation

The challenges to TQM implementation identified from the studies are shown in the following figure 5.

**Figure 5 challenges to TQM implementation identified from the studies**

S.No	Challenges to successful implementation of TQM in educational institutions																											
	LSI	LF	LOC	LMC	FF	FI	FMI	R	LC	LI	LE	A	CO	RG	LMF	LCI	LCE	FD	LI	TC	CM	DMA	NLFI	AS	BE	AC		
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21	/			/				/			/													/				
<b>Total</b>	<b>1</b>	<b>10</b>	<b>2</b>	<b>11</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>8</b>	<b>3</b>	<b>5</b>	<b>10</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	

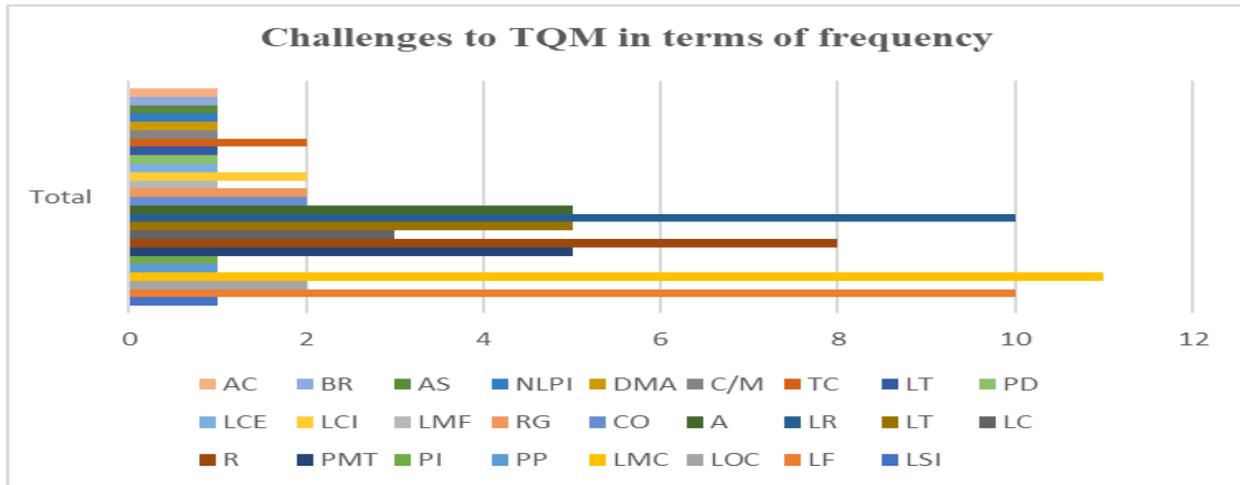
Source: a literature review

**Key:** Lack of funding and resources (LF); lack of management commitment (LMC); Poor and ineffective planning (PP); Political interference (PI); and Poor teachers' status and morale (PTM); LC (Lack of communication); (R) resistance to TQM; LT (lack of training); LR (lack of resources); LOC (lack of coordination); A (ambiguity of TQM); LSI(lack of staff involvement); RG(Rigidity towards TQM); LT(lack of trust); PD(poor documentation); LCE(lack of customer empowerment);LCI (lack of customer identification); LMF (lack of market focus); C/M (corruption and malpractice); DMA (Difficult in measuring assessment of performance indicators); NLPI (Not linking promotion with increments in pay with the achievement of goals), CO(competition ) and AC (accreditation constraints).

**Study No. (S.No.) :**(1) Suleman & Gul (2015) ;(2) Zabadi (2013) ;(3). Rosa et al. (2012) ;(4). Kosgei (2014) ;(5). Maria João Rosa & Amaral (2007) ;(6). Ramdass & Nēmavhola (2018) ;(7). Ali & Shastri (2010) ;(8). Kigozi (2019) ;(9). Mobegi et al.(2010) ;(10). Alzafari & Kratzer (2019) ;(11). Mishra & Pandey (2013) ;(12). Akinlolu et al. (2010) ;(13). Talib et al. (2011) ;(14). Soh-el-Uz-Zaman (2016) ;(15). Ravindran & Kamaravel (2016) ;(16). Ariff et al. (2007) ;(17). Alruwaili (2013) ;(18). Mohammed et al. (2014) ;(19). Sajjad & Syed (2017) ;(20). Hussein et al. (2017) and (21). Mensah et al. (2012).

From figure 2, 26 challenges to the successful implementation of TQM in educational institutions have been identified from the included studies with lack of leadership commitment having the highest frequency (11) followed by lack of funding (10), then resistance to TQM implementation with (08) and then lack of training, the ambiguity of TQM and Poor teachers' status and morale with the frequency of 5. These were followed with lack of communication with 3, then lack of coordination, competition among the staff, rigidity, lack of customer identification, time constraints all with the frequency of 2 while the rest namely, lack of staff involvement, Poor and ineffective planning (PP); Political interference (PI), lack of market focus, lack of customer empowerment (LCE), poor documentation(PD), lack of trust(LT), corruption and malpractice(C/M), Not linking promotion with increments in pay with the achievement of goals, difficult in measuring assessment of performance indicators, the attitude of the staff(AS), bureaucratic restrictions(BR) and AC (accreditation constraints) had a frequency of 1. The summary of several challenges to TQM is shown in the following figure 3.

**Figure 6 Summary of the number of challenges to TQM**



Source: a literature review.

#### 4.0 Discussion of the findings

This section presents the discussion of the findings of the study as stipulated by the research questions and objectives.

##### 4.1 Most prevalent challenges to successful TQM in educational institutions

Twenty-one articles were included in the final review. Consistent with the current literature review and with the views of the scholars such as Kosgei (2014), Ongaki & Nyamiobo (2014), Suleman and Gul (2015), lack of leadership/top management commitment, lack of funding, and resistance to TQM were identified as the most prevalent challenges to TQM implementation to TQM implementation in educational institutions. Other potentially important challenges identified in this review included; Poor teachers’ status and morale, lack of communication, then lack of coordination, competition among the staff, rigidity, lack of customer identification, time constraints, lack of staff involvement, Poor and ineffective planning, political interference, lack of market focus, lack of customer empowerment, poor documentation, lack of trust, corruption, and malpractice, not linking promotion with increments in pay with the achievement of goals, difficult in measuring assessment of performance indicators, the attitude of staff, bureaucratic restrictions and accreditation constraints.

#### **4.2 Education sector with the more challenges to TQM implementation**

Regarding the education sector with the most prevailing challenges to TQM, the review unveiled that higher education had the highest number of challenges which were identified in 17 studies followed by secondary education with three studies and finally tertiary education with one study, there was no study investigating any challenge to TQM in primary education. This indicates that there is still a need for more research to be conducted to identify challenges in primary education.

#### **4.3 Research approaches/designs**

According to the review, the most adopted research approach/design in investigating challenges to TQM implementation in educational institutions was the quantitative design/approach and this was evidenced in sixteen (16) studies while those which applied qualitative were seen in five (5) studies and study applied mixed methods approach/design. This indicates that there is still a need for more research on challenges to TQM implementation using a mixed-methods approach in educational institutions. This can be useful in reducing the biases and weaknesses of either qualitative or quantitative approach/design when used alone. It can also be used to increase the robustness of the findings of the study as it may cater to those challenges which can't be assessed using only numbers and also considering those which can't be fully expressed in terms of narratives and texts in one study.

#### **5.0 Conclusion**

TQM is regarded as the most important management approach for achieving the quality of education as well as improving performance in educational institutions. The study identified lack of leadership/top management commitment, lack of funding, and resistance to TQM as the most prevalent challenges to TQM implementation in educational institutions. Furthermore, the review also discovered that the most adapted research design/approach in investigating challenges to TQM was a quantitative approach/design than a qualitative and no study applied mixed methods. The review finally indicated that most challenges to TQM were witnessed in higher education than in secondary and tertiary education while no study on TQM challenges was identified in primary education.

## 6.0 Recommendation

It is suggested that to expand the conceptualization of challenges to TQM in educational institutions, a mixed methods research design/approach should be applied, and future research should be widened to include the identification of challenges to TQM in primary education. Furthermore, the scope of this study can be made more comprehensive by including more databases and search terms while conducting future reviews.

## 7.0 Limitations of the study

The study was limited to only three databases namely Emerald Insight, ERC, and Elsevier, and the study range between 2005 to 2019. Although a good number of keywords were used, there can be other likely keywords that can be included to make the review more exhaustive.

## 8.0 Contribution to the study

The study has contributed to the enrichment of the relevant literature and made theoretical and methodological contributions regarding the investigation of challenges to TQM implementation in educational institutions. By identifying the challenges to TQM implementation, this study has provided a foundation on which successful implementation of TQM can be based to improve the quality of education. This work has also identified a gap in the research approach/design adapted in investigating challenges to TQM in educational institutions and the area lagging while conducting studies on TQM challenges hence providing an overview for future research.

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