

TQM in Private Secondary Education in Mauritius

Teena Gomes* and Shireen Panchoo

*Corresponding author email id: teenagomes25@gmail.com

Date of publication (dd/mm/yyyy): 11/06/2017

Abstract – The Strategy Plan 2008-2020 of the Ministry of Education and Human Resource Development (MEHRD) of Mauritius, advanced that all schools should foster innovation and generate new knowledge in order to promote an effective and efficient education and training system that is inclusive and integrated, comprehensive and holistic for the sustainable development of the island. However, there is a large disparity in terms of quality standards between private and state secondary schools in Mauritius. Students sit for the same examination but are not given the same educational opportunities. Hence, the aim of this research paper is to theoretically conceptualize TQM factors in private secondary schools in order to leverage the educational opportunities of Mauritian students by adopting appropriate quality landmarks. So, a study was conducted to explore school rectors' views and to empirically investigate educators' perception on TQM factors to devise a quality framework for private secondary schools so as to sustain quality education. A mixed method approach was adopted. Eight private secondary school rectors were interviewed and 283 self-completion questionnaires were administered to their educators. Findings from both school rectors and educators revealed that though their ideas converged, school rectors and educators demonstrated different degrees of appreciation of the critical factors needed for quality education and agreed that a quality framework is imperative in private secondary schools to sustain quality education throughout the island so as to leverage educational opportunities.

Keywords – Critical Success Factors of Total Quality Management, Private Secondary Schools, Quality Education, Total Quality Management.

I. INTRODUCTION

Today, more than ever before in human history, the transformation of any nation depends on the quality of its education. Quality has become an integral feature of the education system; from primary to higher education, world-wide. Indeed, quality secondary school education can lead to national transformation [1]. Hence, researchers in the secondary education setting motioned that students' performance level is unsatisfactory without quality education, resulting in inefficient work force in the long run [2]-[5]. In fact, the lack of quality impedes on the success of secondary schools. Consistently, it was observed that there is a paramount incongruity between secondary schools embracing the effort to provide quality education and those which do not [5], [6].

So, academics have formulated frameworks for Continuous Quality Improvement (CQI), Strategic Quality Management (SQM) and now the latest Total Quality Management (TQM) [7]. Although there might be some differences among these approaches, TQM is considered as more appropriate to capture essence of quality improvements in the secondary education setting as it provides a framework enhancing positive developments

[8], [9]. Indeed, TQM is the cultivation and practice of quality through which the school system focuses on continuous improvement of all school processes [8]. Commitment to quality makes educators become proficient and students proud to learn and work hard for progress. TQM provides guiding principles for the needed educational reform.

Likewise, in pursuit for quality, the Reform Policy of Education in Mauritius in 2004 was developed to transform the landscape of the education system into one which guarantees access to quality education to all children of the Republic of Mauritius and to improve quality teaching so as to ensure lifelong learning. "Quality of education is the skill of building the abilities of accommodating and assimilating knowledge in the area of educational needs and the implementation of this knowledge to create mechanisms to accomplish the expectations of customers and educational services" [10].

Nevertheless, the examination structure in Mauritius, in particular after the primary education cycle, methodically sifts and sorts students into elite secondary schools and less desirable secondary schools. Additionally, students are channelled to either state or private secondary schools. Ironically, after the secondary education cycle, students, though being streamed in different schools, sit for the same examinations. Simultaneously, there is a widening gap in terms of quality measures between state and private secondary schools in Mauritius. The quality of school processes in State secondary schools in Mauritius is regularly and closely monitored and assessed by Quality Assurance agencies set up by the Ministry of Education in order to sustain quality education. However, in private secondary schools, monitoring and assessments are not carried out. There is no benchmark for measuring the quality of their educational processes. This eventually creates a disparity between the two types of school. Ergo, students from both institutions are not given the same educational opportunities to compete on the same footing and eventually to succeed.

Furthermore, many private secondary school educators exhibit average level of TQM in education [11]. As a result, educators are delivering services only based on experience, routine and intuition; which held good at a moment in time but year after year, customers (students and parents) are changing and so are their needs, demands and expectations. Accordingly, no proper benchmark is espoused to cater for students' needs (Maslow needs) so as to bring forth quality education. Additionally, educators are not empowered the ability and knowledge to meet these new needs, new demands and new expectations to improve the quality of private secondary education. Subsequently, in this global competitive market, it is imperative for all secondary school educators to be exposed and trained to more quality in education which in

turn will influence their perception of teaching as they will have to follow some guidelines to offer quality education to students. The quality of any educational system depends greatly on the educational attainment of educators as no system of education can be qualitatively higher than the quality and commitment of its educators [1].

Besides, there is a lack of commitment to quality in many secondary schools at the top management level [12]. Eventually, it has a snowball effect throughout the organization. In fact, especially in the case of private secondary education in Mauritius, it is observed that school rectors are only trying to keep the ship afloat rather than adopting innovative strategies to encourage quality education among educators and students.

In this regard, though there is a plethora of Quality systems, the adoption of TQM critical success factors in secondary education in Mauritius is most appropriate as it has a gargantuan potential to respond to educational challenges and has proven to have significant impact on national transformation [1], [8], [13]. Actually, adopting TQM factors in secondary education are means for improving students and educators morale, increasing performance, delivering higher quality services to customers (students and parents) and providing a direction for the school [14], [15]. It is thus of utmost importance for secondary school rectors to be concerned with the significance of TQM factors adoption so as to improve the processes of their institutions. As a result, educational opportunities of students from private and state secondary schools would be leveraged and so, their performance would be measured fairly.

In view of that, there is an urgent need for the rethinking of the nature of schooling. Therefore, by applying the most critical success factors of TQM, Private Secondary Education in Mauritius can be improved and goals of quality education in schools can be achieved. Consequently, the aims of the research are firstly to explore school rectors' views on TQM factors adoption in Secondary Schools and secondly, to empirically investigate educators' perception on the adoption of TQM critical success factors in Private Secondary Education. Consistently, the objectives of the paper are;

- To explore school rectors' views on TQM factors adoption
- To assess secondary school educators' perception in adopting TQM factors
- To identify the most critical success factors of TQM needed to bring forth quality education in private secondary schools

II. THEORETICAL FRAMING

A. Total Quality management factors in Secondary Education

TQM factors are now widely adopted in Secondary Education around the world since incorporating TQM factors into teaching have shown to improve performance and also the overall quality of the classroom experience for students and educators [9]. Hence, TQM has become the most prestigious quality indicator for measuring the overall quality of an educational institution. TQM factors

allow education system to review and rethink of their processes for improvement at every level of the organisation. TQM practices provide school stakeholders with a perspective to look at the obstacles facing secondary schools and with a tool to remove those obstacles in the way. Indeed, studies demonstrated that there is a significant relationship between the adoption of TQM factors and students' academic performance. Thus, using TQM factors as benchmark are absolutely necessary in private secondary education as they allow performance improvement. At the same time, the quality of services offered by Private secondary schools would be similar; quality-wise, to those of State Secondary schools. TQM can be applied to encourage effective teaching and learning in terms of managing, securitizing and enhancing the quality of teaching practices in the classroom environment through the various teaching strategies [16]. TQM factors can be used to focus on the needs, expectations, experiences and problems of students and simultaneously using feedback for the continuous improvement of teaching and learning in Private secondary schools. Likewise, TQM factors have direct influence on the human improvement which can lead to high commitment and team spirit in the organization [17]. Eventually, educators should be encouraged towards positive aspect of TQM and to take active participation to render quality education [15], [18]. Furthermore, the quality of management is essential as the lack of success or the low effectiveness of TQM in schools results from the lack of sufficient skills of school rectors in the planning [19]. In this connection, TQM factors seem appropriate for private secondary educational settings.

B. Critical Success Factors of Total Quality Management in Education

Critical Success Factors of TQM allow organisations to attain satisfactory results and ensure organisational competitive performance. Table 1 presents the Critical Success Factors brought forward by some researchers in the education sector during the past years. The most common Critical Success Factors of TQM recently proposed in education as proposed in the table below are considered as most appropriate for the educational setting. In the studies carried out around the world, researchers put forward that the factors; "Top Management and Visionary Leadership", "Continuous Improvement in Processes", "Employee Involvement and Empowerment" and "Customer Orientation" are considered as most common and crucial quality landmarks in secondary schools and are thus, efficiently implemented. Researchers believe that the commitment of the management to quality with an effective leadership, involving and empowering educators in the school processes, and focussing and surpassing the needs and expectations of students are the avenues for bringing forth quality education. However, as it can be observed in Table 1, the factor "Reward and Recognition", though recognition of hard work is vital in increasing motivation of educators and students, is less practiced. The management tend to focus more on the school administrative and academic processes rather than implementing a reward system.

Table 1: Critical Success Factors of TQM in Education

Researchers	Critical success Factors used in Education						
	Top Management and Visionary Leadership	Continuous Improvement	Employee Involvement and Empowerment	Education and Training	Customer Satisfaction/Orientation	Reward and Recognition	Information and Communication
Ali and Shastri (2009)	X	X	X	X	X		X
Sabet, Saleki, Roumi and Dezfoulan (2012)	X		X	X		X	
Zakuan, Muniandy, Saman, Ariff, Sulaiman, Jalil (2012)	X	X	X	X	X		X
Sudha (2013)	X		X	X	X		
Zubair (2013)	X	X	X	X	X	X	
Golmohammadi, Zohoori, Hosseinipour, Mehdizadeh (2014)	X	X	X	X	X		X
Dassanayake (2014)	X	X			X		
Saberi and Romle (2015)	X	X	X		X		X

Top Management Commitment and Visionary Leadership

The success of TQM in Private Secondary Education depends largely on the top management commitment; that is, in the case of private secondary schools in Mauritius; the school rector. The role of the top management acts as the first enabler and driver in TQM implementation in any organisation [20]. Top management should be committed to creating an organisational climate which empowers employees; that is, the educators, with an aim to improve the overall performance [21]. Actually, research demonstrated that a lack of positive commitment at the top management level may lead to resistance and issues in the process of implementing TQM [22]. Indeed, educators may resist changes if they are not well documented about TQM implementation [23]. It has to be borne in mind that management commitment involves articulating a vision for the future that is clear and compelling and also providing a strategic and strong leadership where the top management is able to establish practice and a long term vision for the organisation [24]. Hence, rectors of Private Secondary schools have to set quality goals, develop system that guides organizational performance through a continuous quality improvement process. In fact, successful implementation of TQM requires effective changes in an organization’s culture and it is somehow impossible without management leadership [25].

Continuous Improvement in Processes

Continuous improvement is among the core concept of TQM as advocated by quality gurus [26]-[30]. It is a key enabler to increase productivity [31]. Hence, when laying emphasis on ‘Continuous Improvement in Processes’ in Private secondary schools, educators will be more productive and by doing so, will improve students’ performance. So, there should be continuous improvement in all processes such as administrative issues, the pedagogy, lesson planning or the infrastructure. In TQM, continuous improvement assumes that everything is going well and the value can be increased either slowly or drastically. Also, Continuous Improvement can be considered as the “wheel of the organizational vehicle”. It is the effort produced by the wheels, which will make the

vehicle move forward [12]. Continuous Improvement is an on-going process that focuses on improvement and it builds relationship with other elements and affects the organization environment [31]. Continuous improvement elevates the performance of an employee (educator) who is allowed to assist in the implementation of TQM and requires the support of all parties (educators, rectors, students, administrators). Continuous Improvement leads to progress in terms of student performance, innovation and organizational development of Private secondary schools [20], [32].

Customer Orientation / Satisfaction

Understanding, satisfying and surpassing customer needs and expectations are the main goals of every organisation [24]. Private Secondary schools have the paramount responsibility to deliver services to meet students’ expectations and, therefore, satisfy their needs. So, effective TQM implementation requires that considerable emphasis must be given to students to achieve high customer satisfaction. Private Secondary schools ought to understand the current and future wishes, so that services surpass customer satisfaction. Correspondingly, for organisations (private secondary schools) to be successful, they must always put customer (students) needs first before any decision making. As a result, this will improve the quality of education and will increase competitiveness. Hence, the fast and timely response of educators and school rectors to students’ requirements will improve service quality. Failure to address such issues will negatively affect the schools because students allow schools to exist.

Employee Involvement and Empowerment

Employee Involvement is recognised as an essential TQM Critical Success Factor [22]. Successful implementation of a TQM environment requires a committed and skilled workforce participating fully in the organisation’s activities carried out to improve quality. Private Secondary school educators should be encouraged to feel that they are active builders of the learning environment and as such, they will be eager to work towards quality education. Also, employees (educators) within the organisation must have a sound understanding

of the importance of product quality [12]. Educators must be encouraged to take responsibility, communicate effectively and be committed toward improving the quality of processes as they sometimes know better the needs of students than the school rectors. Additionally, employees within the organisation are also customers; internal customers (educators) should be well satisfied if the organisation desires to achieve a full satisfaction for its external customers (students). Indeed, without the engagement of educators, schools cannot function properly.

Education and Training

Training of educators is fundamental for building the 'human capital' of the school as it provides educators with new techniques and practices necessary to implement TQM factors successfully. In fact, to deliver high quality services, employees (educators) must be equipped with appropriate knowledge and skills [12]. Training and Education are levers for change, and they have significant influence on the change process. Training allows employees (educators) to understand the quality management system and their roles and responsibilities within it [24]. Private Secondary schools are, therefore, responsible for providing adequate quality training to their educators in order to help them increase knowledge and acquire skills to improve and solve the problem of quality in Private Secondary schools.

Reward and Recognition

Organisations which want to achieve quality and customer satisfaction need to integrate a Reward and Recognition system. Researchers in the field of TQM implementation motioned that the factor 'Rewards and Recognition' maximizes employees' potential and involvement in the organisation [33], [34]. As such, educators must be given due recognition for their contribution and their ideas so that they feel a sense of belonging to the school. In doing so, educators will become one of the main contributors of the school's journey to quality. Students are also customers (external) of the school and should be rewarded and recognised (financial reward, gifts and appraisal) for their hard work and good behaviour so as to encourage them for continuous improvement [35]. Reward is a major initiator for change and improvement among students as it is a psychological process to develop confidence among school members (students, educators and school rectors) and encourage them for decision-making and problem-solving [12]. Indeed, recognition, praise, coaching and showing concern are rewards that must be considered as there is a significant relationship between rewards and recognition, and motivation and high performance of students [36]. Reward and Recognition should be rank ordered- the higher the achievement, the higher the reward. In a TQM environment, recognition of effort provides a powerful incentive for everyone to become involved in quality improvement. Simultaneously, management (School Rectors of Private secondary schools) should demonstrate commitment in the rewarding process [33]. In line, educators should be involved in planning and executing any recognition or reward system.

Information and Communication

Researchers in TQM implementation in education system contended that to successfully accomplish quality processes, communication intertwined in the quality process at all levels, is vital and argued that as the top management's vision of quality is filtered down through the ranks, the vision and the plan can lose both clarity and momentum [37]. Hence, Head of Departments should serve as translators and executors of school rector's directives. Moreover, communication instils confidence as well as provides encouragement. Of course, educators as well as school rectors must be willing to listen and learn. So, it is essential for educators and school rectors of private secondary schools and their students to communicate; as effective communication results in reducing fears and this will allow TQM to be more approachable. Communication is the part of the cement that holds together the bricks of the total quality process. Hence, effective communication and a feedback system are fundamental in conveying ideas to the management and to incorporate the necessary changes required [37].

Challenges of TQM in Secondary Education

Though TQM has proven to be beneficial in education, it is faced with challenges as changes are not achieved fortnight. Some researchers remain sceptical about the application of TQM factors in schools [14], [38]. It is argued that one should differentiate between education and business before education jumps into another corporate bandwagon such as TQM. Though the perception of TQM is a desirable ideal in an industrial context, its feasibility and value within educational institutions are debatable [39]. Similarly, there are several root causes of quality system failure in education, such as poor inputs, poor delivery services, lack of attention paid to performance standards and measurements, unmotivated staff and the neglect of students' skills [4], [40]. Indeed, TQM fails in schools simply because educators normally do not use data to improve the system [41]. Across time, educators have relied on intuition, routine and experience to solve complex issues in schools. Surely, emotions are chief measures of personal well-being; however, they do not help to evaluate the efficacy of a whole school system [42]. In addition, the lack of management commitment in secondary education is the main challenge faced in the implementation of TQM [43]. This, eventually, impedes on improvement in processes as there would be no improvement without management commitment.

III. RESEARCH METHODS

Secondary education systems around the world are redefining the quality of their education in this competitive era and turning to the implementation of TQM factors in their processes so as to provide a service of continuous excellence to their customers. In this connection, to bring forth quality education in Private secondary schools in Mauritius, TQM factors can be considered as landmarks. Hence, the purpose of the study is to explore school rectors' views and to empirically investigate educators' perception on the adoption of TQM Critical Success

Factors in Private Secondary schools and consequently, to devise a quality framework to leverage educational opportunities between private and state secondary schools in Mauritius. Eight private secondary schools in Mauritius were selected for the study. The most Critical Success factors of TQM as proposed in the Literature Review will be considered as guidelines for sustaining quality in Private Secondary schools.

A. Research Design

Practitioners in the field of TQM in education regularly make use of both qualitative and quantitative methods as research is said to be more robust when combining research paradigms. Therefore, to be able to assess the reliability and the validity of the research, a mixed method approach was adopted for this study; that is, two research techniques were used, namely: self-completion questionnaire and semi- structured interview respectively. A non-probability convenience sampling method was used. The focus was laid on eight private secondary schools in Mauritius. The private secondary schools were selected based on the analysis of the performance measurement of their students; which is low, and the classification of the schools at the national level; being considered among the less-desirable ones in Mauritius.

B. Research Technique

Based on the recent literatures, firstly, a semi-structured interview was developed for interviewing the 8 school rectors of the 8 private secondary schools so as to explore their views on the adoption of TQM factors in their institutions [44]. The questions formulated during the interview were based on the critical success factors of TQM. For this study, the semi-structured interview was considered as suitable as the interviewer wanted to delve into the meanings of the school rectors’ attitude concerning quality education. Indeed, this method allows the researcher to deal with the order of and the wording of the questions, where conversation can be conducted freely as semi-structured interview encourages two-way communication. Also, questions which are deemed appropriate can be asked in most suitable words and explanation can be given and clarification can be asked for if the answer is not clear. Likewise, this method provides comparable qualitative data for analysis [45]. A valid and reliable range of responses from the semi-structured interview was obtained by following two specific criteria in selecting the interviewees. The first criterion referred to the school rectors themselves and the second criterion was related to their quality improvement efforts.

Secondly, after interviewing the school rectors, a questionnaire was designed and administered to 25

educators of the 8 private secondary schools to measure their perception on TQM factors adoption in their school. It was pre-tested through what is called a pilot survey. The educators revealed the difficulties experienced filling in the questionnaire and at the same time, it also indicated the willingness of the educators to participate. This step helped to refine the questionnaire and remove ambiguities in the sequence of the questions, unclear or wrongly worded questions, form and appearance [46]. Consequently, a self-completion questionnaire was redesigned and re-administered to the 283 educators of the 8 private secondary schools (approximately 36 educators per school) to measure their perception on the adoption of TQM factors in their school. The questionnaire, with closed questions, was used as a larger sample can be targeted in a relatively short period and concurrently, data can be easily classified, compiled and quantified. The questionnaire used included a five-point Likert-type scale anchored at Strongly Disagree=1 and Strongly Agree =5, indicating respondents’ disagreement or agreement with each item as this scale makes educators more comfortable with a wide variety of choices and provides direct and reliable assessment of attitudes when scales are well constructed. This method is adapted to most attitude measurement situations and lends itself well to item analysis procedures [47]. The questionnaire developed consisted of 7 sections with a total of 32 items covering the seven critical success factors of TQM as explained in the literature review.

Data collected from the interview will be analysed thematically and data collected from the questionnaires will be processed by using the SPSS version 19.0. It is to be noted that the questions asked to the school rectors and the educators during the semi-structured interview and the self-completion questionnaire respectively were closely related to allow comparison of answers to be made. Data collected from the semi-structured interview with the school rectors were analysed. All interviews were recorded, transcribed and coded. No software package was used with regard to the coding process. The coding structure was developed by the interviewer. The analysis of the qualitative data proceeded by thematic analysis in order to classify the TQM factors as shown in Table 2. Data was critically discussed. The reliability of the results was enhanced by documenting the research process thoroughly. External validity was enhanced by drawing analytical conclusions based on the literature review. To enhance construct validity, the same general structure was used for all interviews.

Table 2: Coding of Thematic analysis of interview

TQM critical success factors	Actual quality Strategies	Views on implementation of TQM factors in Private secondary Schools	Most critical success factors of TQM in Private secondary schools
Top Management and Visionary Leadership (TV)	(TVc) Culture and climate	-	TV
Continuous Improvement in Processes (CI)	(CIp) Professional Development (CIi) Infrastructure	(CIp) Enhance educators professional development	CI
Employee empowerment and Involvement (EI)	(EId) Distributed leadership (EIe) Extra-Curricular activities	(EIe) Involvement of educators	-

Education and Training (ET)	(ETw) Workshop and training (ETp) Professional development	(ETin) Innovation	ET
Customer Orientation/ Satisfaction (CO)	(COt) Teaching and learning (COe) Extra-curricular activities (COev) Student’s evaluation	(COh) Student’s holistic development	CO
Reward and Recognition (RR)	(RRr) Reward students (RRa) Appraise educators	(RRr) Reward students	RR
Information and Communication (IC)	(ICg) Grievance to management	-	-
Challenges of TQM (CTQM)	-	(CTQMrc) Resistance to change (CTQMlr) Lack of resources	-

Whilst data collected from the questionnaires were processed by using the SPSS version 19.0. Descriptive statistics, that is, mean and standard deviation were calculated. A paired mean t-test was used to test the significant mean difference between educators’ perception and their expectation of the quality of education in the 8 private secondary schools. Reliability tests were done for each critical success factor of TQM used in the study. Also, a regression analysis was carried out to identify the most critical TQM factors for quality education. A reliability analysis was performed to ensure that the scale items measured the corresponding latent variables consistently and were error free using Cronbach’s alpha. All the reliability scores for the study were within the acceptable range; that is, exceeding the recommended value of 0.7 as shown in Table 3 [48]. So, it can be concluded that all the alpha values indicated that the study’s instruments were reliable. Indeed, the reliability of measures in this study was analysed based on the guidelines provided as in [13].

will eventually be destroyed after analysis. The questionnaires were distributed to educators who were willing to participate in the study. So participation was fully voluntary. Consent forms for administering the questionnaires and to tape the semi-structured interview were handed to educators and school reactors respectively. These ethical codes guaranteed the trustworthiness and transferability of the findings of this study on school reactors’ views and educators’ perception on TQM.

Similarly, based on the recent literature reviews and questions as proposed in [1] and [52] for questionnaires and semi-structured interview, the researcher formulated the questions both for the questionnaire and the semi-structured interview, whereby the concepts of objectivity and value freedom were respected to avoid interviewer bias. Since, the interview was to some extent flexible and free flowing, the school reactors were able to express their views freely. The interview transcripts were coded thematically in line with the interview schedule, hence, reducing researcher bias.

Table 3: Reliability score for each factor used

Scale Items	Cronbach Alpha
Top management commitment and Visionary leadership	0.971
Continuous improvement in processes	0.934
Customer orientation/ satisfaction	0.910
Employee involvement and empowerment	0.955
Education and Training	0.921
Reward and recognition	0.938
Information and communication	0.759
Challenges of TQM Adoption	0.842

C. Ethical Research

Ethical dilemmas are likely to emerge with regard to data collection and in the dissemination of findings [49]. The researcher should strike a balance between the demand placed on the latter as professional scientist in pursuit of truth, and the subject’s insights and values [50]. As such, some norms and mores had to be respected not to cause any harm to respondents (School reactors and educators). Hence, a letter was sent to each school reactor outlining the purpose of the research for the interview requesting their availability and to grant the researcher permission to evolve within their school premises for collecting data from educators. Likewise, a cover letter was attached to each questionnaire which was administered to the educators, explaining the aim of the study. The letters specified that the collected data would be treated with strict confidentiality [51]. The educators and school reactors were informed that the information is required only for research purposes and that the questionnaires as well as the interview transcript and tape

IV. FINDINGS AND DISCUSSION

The study was carried out to devise a suitable quality framework agreed upon by both educators and school reactors to bring forth quality education throughout private secondary schools in Mauritius and concurrently, leverage educational opportunities of all students in Mauritius. In consequence, both results from the thematic analysis of the semi-structured interview with the school reactors and results from statistical analysis of the questionnaires administered to the educators were compiled and compared.

A. School Reactors’ View

From the 8 school reactors of the selected private secondary schools, it was observed that the majority of school reactors has more than 5 years of experience (62.5%) and that 75 % of the school reactors were qualified in management which is, indeed, a basic requirement to be appointed as secondary school reactor. Hence, data collected during the interview was transcribed. The answers to the questions were coded, analysed, compiled and discussed. The results provided insights on the school reactors’ views on the adoption of TQM factors in private secondary schools. Findings demonstrated that the school reactors believed that TQM factors should be implemented in their schools as they act as suitable landmarks to reach excellence and quality education. School reactors put forward that without a visionary leader, the school has no aim. “The school reactor has to drive the passengers to the right destination else the school will lose bearings”

advanced one of the school rectors. Thus, having an aim shows the direction to take. In this connection, the majority of school rectors furthered that a visionary leader motivates its troop and the work is performed effectively at every level (Top Management and Visionary Leadership). This idea is supported in [24] and [53]; that the role of management must be focused towards driving, involving and assessing. Moreover, processes must be evaluated so as to innovate with time. This will, eventually, “encourage educators to grow professionally” (extract from the semi-structured interview) and thus lead to progress (Continuous Improvement in Processes). Continuous improvement is able to elevate the performance of educators and learners [20]. Since educators are the backbones of the school so they must always seek for professional growth. Educators must be suitably equipped to satisfy the needs of the customers (parents and learners) [12]. Besides, since the aim of the school rectors is to create “an environment conducive to quality teaching and learning”, TQM adoption will encourage educators to innovate in their teaching processes and strategies (Education and Training). Likewise, TQM factors implementation will help for the holistic development of students by giving guidelines for educators “to assist in the cognitive, psychomotor and affective domain of the students”, which is congruent to that as proposed in [43]. Along the same line, all processes must be in synergos to go beyond expectations of the customers (Customer Orientation) [53]. School rectors mentioned that students are rewarded and recognised for their successful performance to encourage improvement. As stated by one of the school rectors; “Prize Giving Day is organised to reward students performing successfully. Parents are invited for the occasion”. In line, students rewarded for good performance symbolises recognition of hard work and an encouragement for improvement (Reward and Recognition) [56]. Lastly, school rectors contended that to some extent TQM factors can be difficult to implement because of lack of resources such as funding and the unwillingness and resistance of the educators to innovate [14]. Extract from the semi-structured interview; “Educators like to be in their comfort zone” and “It is money consuming” (Challenges of TQM).

Hence, as it can be concluded from the school rectors’ views during the semi-structured interview, the key factors of TQM as listed in order of degree of appreciation below, are the followings;

1. Top Management and Visionary Leadership (TV)
2. Continuous Involvement in Processes (CI)
3. Customer Orientation (CO)
4. Education and Training (ET)
5. Reward and Recognition (RR)

Per se, school rectors motioned that these 5 TQM factors, as listed above, are critical to the successful journey to quality secondary education. Nonetheless, from the results which emanated from the semi-structured interview, it can be observed that school rectors do not consider the factors ‘Employee involvement and empowerment’ and ‘Information and Communication’ as crucial in their secondary schools. For instance, one of the

school rectors stated that “Empowering educators within the four walls of the classroom is more than enough” Also, it can be deduced that educators are neither rewarded or appraised or recognised for their hard work.

B. Educators’ Perception of TQM Factors

The majority of educators has been working in the 8 private secondary schools for more than six years. Some of the private secondary schools (45.2 %) have a functional Senior Management Team (SMT) and 31.1 per cent of the sample advanced that their school do not have a mission and vision statement. Though no comment was required from the educators concerning this section, some educators who ticked ‘Yes’ wrote: “It is as good as inexistent” or “It is not functional”.

Additionally, the descriptive statistics were calculated using the SPSS version 19.0 to determine the most critical factors of TQM needed for quality education in private secondary schools. Also, the extent of challenge to TQM factors adoption was measured and analysed. The results; the perception of the 283 educators on TQM factors based on the Likert Scale, are illustrated in Fig. 1 and an analysis of the findings is exposed below.

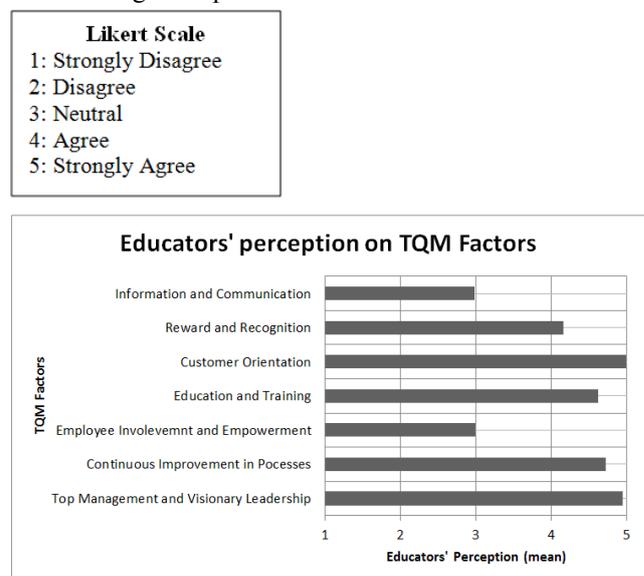


Fig.1. Educators’ Perception of TQM factors

Top Management Commitment and Visionary Leadership

For a successful TQM factors implementation, school rectors must first believe in it. In fact, the majority of educators believed that the factor ‘Top Management Commitment and Visionary Leadership’ is essential to bring forth and sustain quality in private secondary schools (mean=4.95). Indeed, 99 per cent of educators advanced that quality awareness and improvement must be championed by the school rectors as demonstrated in Fig. 2. This factor is highly significant and as supported in [54], this factor can positively affect educators’ commitment to TQM. Without a strong top management commitment; there is no high product quality. The result is similar to that of [55], supporting that Top Management Commitment and Visionary Leadership is the cornerstone for a school to implement TQM factors. School rectors are

responsible to take the initiative for TQM implementation and should be involved in the application of quality so as to reach excellence.

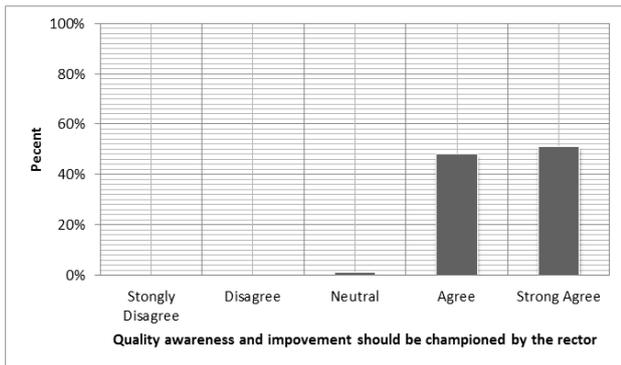


Fig. 2. Educators' perception: Rectors should champion quality awareness and improvement

Continuous Improvement in Processes

Educators have little divergence on the factor 'Continuous Improvement in Processes'. They argued that innovation and improvement must be encouraged (mean=4.78) as shown in Fig. 1, and that they are willing to engage in continuous change and transformation in school processes (mean=4.67, 93.4 %) as shown in Fig. 3. The result shows that the educators agree that this factor is needed for quality education. Indeed, private secondary schools should encourage innovation, and should insist upon incremental improvements, especially after the innovation. In order to achieve better quality of students' performance and school processes, the key processes must be identified and improved continuously. This analysis is congruent to that as in [24].

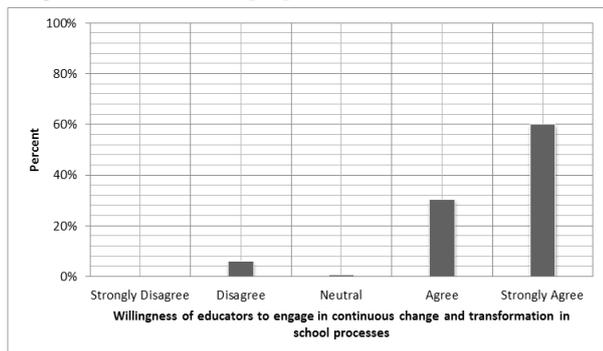


Fig. 3. Educators' perception: Willingness of educators to engage in continuous change and transformation in school processes

Employee Involvement and Empowerment

The mean 3.00, as demonstrated in Fig. 1, for the factor 'Employee Involvement and Empowerment' reflects that educators have a wide spread of divergence in perception; some educators agree, other disagree while some are neutral. In fact, no formal processes are used to find out educators' opinions and views on school processes. Besides, according to educators, the school management neither empowers them nor encourages innovation. It is to be pointed out that the lack of educators' involvement, empowerment and encouragement impedes on the quality

of education. However, educators highlighted that teamwork is a common practice in their schools and that it has a significant impact on the quality of education. Indeed, working in a team or group is generally more effective than working individually.

Education and Training

The majority of educators' perception converges in the same direction (mean=4.62 as illustrated in Fig. 1); they agree that the construct 'Education and Training' is necessary for quality education. In order to encourage and sustain quality education in Private secondary schools, educators argued that they should be regularly provided quality awareness education. As demonstrated in Fig. 4, educators claimed that training is an effective means for enhancing their skills and abilities (mean=4.53, 90.6 %).

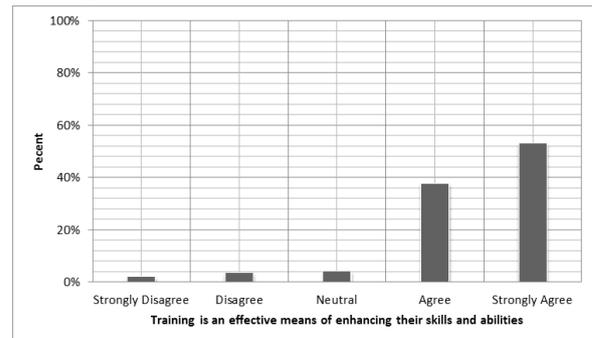


Fig. 4. Educators' Perception: training is an effective means of enhancing their skills and abilities

Hence, results demonstrated that the factor 'Education and Training' is of significant importance for quality education. The result is supported in [12], claiming that educating and training of employees, help them to increase knowledge and enable them to gain skills to improve the quality and thus solve problems efficiently.

Customer Orientation

The results of the mean score (5.00) reflected that educators believed that students are the main customers of the education system. Their aim is, therefore, to satisfy the needs of the students and to ensure their holistic development. Indeed, a successful organisation recognizes the need to put the customer first in every decision made [54]. Hence, to satisfy the needs and surpass the expectations of students, private secondary schools must ensure that appropriate services are delivered effectively. According to educators, 'Customer Orientation' is the most essential factor as demonstrated in Fig. 1. Same was proposed in [24] highlighting the importance to focus on the needs of customers (students) to achieve high customer satisfaction.

Reward and Recognition

Since the private secondary schools are student-oriented, educators, as shown in Fig. 1, advanced that students have to be rewarded for their hard work (mean=4.16) [36]. Nevertheless, findings also revealed, as displayed in Fig. 5, that educators are neither given recognition nor rewarded for duty performed (79 %). Indeed, rewards and appreciation can satisfy educators and will assist them in their commitment towards the school. The evidences advanced for both students and educators

follow the literature as proposed in [56]. From this research, it can be deduced that recognition is given to students rather than to educators, thus bringing new insights to the study.

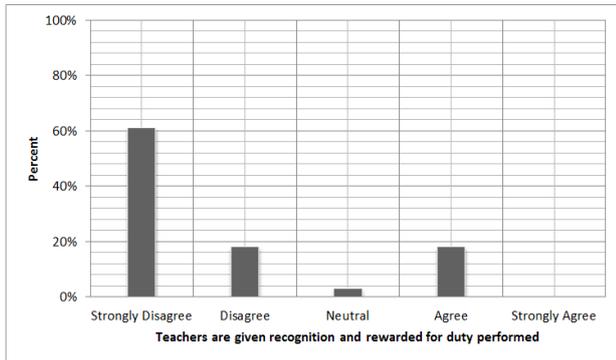


Fig. 5. Educators' Perception: Teachers are given recognition and rewarded for duty performed

Information and Communication

As shown in Fig. 1, findings revealed that the mean for the factor 'Information and Communication' is 2.98. Educators pointed out there is no interaction among all stakeholders. There is poor inter-organisational communication in their school and no clarity of goals in management's initiatives. Eventually, the lack of these impedes considerably on the quality of education. Weak internal communication within departments causes lack of coordination between departments thus, leading to major barrier to TQM implementation [57]. Indeed, when educators are unaware of quality measures or the vision of the school, they will not work towards the same aim as the management.

Challenges of TQM adoption

Based on the results from the questionnaires, educators advanced that they are not resistant to change (mean=4.87) but identified that instead the "lack of adequate information on quality" (mean=3.77) and the "lack of management commitment" (mean=3.63), are challenges to TQM adoption. TQM adoption also faces challenges such as the lack of resources in terms of funding (mean=4.00) as stated in [58]. Low understanding of TQM by educators may trigger resistance to change; a roadblock to TQM implementation [59]. TQM implementation is complex, difficult and lengthy; which involves huge efforts from private secondary schools.

Hence, as it can be deduced from the educators' perception, the key factors of TQM as listed in order of degree of appreciation below, are the followings;

1. Customer Orientation
2. Top Management and Visionary Leadership
3. Continuous Improvement in Processes
4. Education and Training
5. Reward and Recognition

As such, educators motioned that these 5 TQM factors, as listed above, are essential for providing quality secondary education to Mauritian students. Nevertheless, it can also be observed that educators are quite neutral concerning the factors 'Employee involvement and empowerment' and 'Information and Communication'.

The study revealed that, though school rectors and educators have different degrees of appreciating the adoption of TQM factors, both have converging views. The results from both the semi-structured interview and the questionnaire were compared after analysis of each. When comparing the analysis of the data collected, it was observed that both school rectors and educators agreed that the adoption of the following TQM factors are crucial in Private Secondary schools as demonstrated in Table 4.

It was hence observed that both school rectors and educators do not consider the factors "Employee Involvement and Empowerment" and "Information and Communication" as vital for maintaining and providing quality education. As such, communicating their vision for progress or involving and allowing educators to take decisions are not encouraged among school rectors. The results substantiate that as contended in [20] that TQM factors can successfully be linked to and improve educational processes but without communication at every level of an organisation and not empowering the employees, will eventually impede on the implementation of TQM factors. This was confirmed by the educators; they affirmed that they were neither involved in decision making nor empowered, and that there is no two-way communication between the management and the educators.

Table 4: key TQM factors for School rectors and educators

Order	School Rectors	Educators
1	Top Management and Visionary Leadership	Customer Orientation
2	Continuous Improvement in Processes	Top Management and Visionary Leadership
3	Customer Orientation	Continuous Improvement in Processes
4	Education and Training	Education and Training
5	Reward and Recognition	Reward and Recognition

Nonetheless, during the interview, concerning the factor Customer Orientation, school rectors furthered the concept of parents as being customers as well. This concept was not considered by the researchers while conducting the study but it gives food for thought.

V. CONCLUSION

Quality is fundamental in education. TQM is a necessary element which has a direct influence on the human improvement along with other related processes. It can lead to high commitment and spirit in the learning organisation [18]. Indeed, it is seen as the panacea of the ills of the education system world-wide. Consequently, the purpose of the study was to explore private secondary school rectors' views and empirically investigate their educators' perception on the adoption of TQM factors in private secondary schools in Mauritius so as to devise an appropriate quality framework for private secondary schools to adopt so as to be on the same footing as state secondary schools in terms of quality. Both school rectors and educators advanced that (1) Top Management and Visionary Leadership, (2) Continuous Improvement in Processes, (3) Education and Training, (4) Reward and

Recognition, and (5) Customer Orientation are the most critical TQM factors needed in private secondary schools. It can be concluded that this research empirically demonstrated that both school rectors and educators agreed that the adoption of those TQM factors is a landmark for achieving quality secondary education and thus, are ready to adopt quality measures to leverage the educational opportunities across Mauritius. Hence, the proposed quality framework can help to bring forth quality education. Nevertheless, the findings of the study are limited to 8 private secondary schools in Mauritius, and therefore not generalisable. Still, this study contributes to the Private Secondary School quality management debate in Mauritius. In addition, it supports and simulates further research on TQM adoption in Private Secondary Schools.

VI. RECOMMENDATIONS

The findings which emanated from the study provided a platform for school rectors and educators to strengthen the areas where the required level of quality is weak. It was observed that the two main factors, which were not taken into consideration in the private secondary schools selected for the study were; “Employee Empowerment and Involvement”, and “Information and Communication”. Consequently, it can be deduced that not empowering educators will eventually lead to unmotivated and alienated educators. Additionally, it can be seen that there is poor inter-organisational communication in the 8 Private secondary schools. This is so because the management takes all decisions. Therefore, change has to start from the top of the pyramid. Indeed, if Private Secondary schools adopt the TQM factors, considerable improvement will be observed, in particular, in terms of customer satisfaction (students, parents and educators).

It is thus recommended that a replication of this study using larger sample sizes and greater geographical diversity would be obviously valuable in re-examining the validity and reliability of the findings. As a matter of fact, this study can be a stepping stone for the implementation of TQM factors as it opens an area for further investigation on TQM implementation in Private Secondary schools in Mauritius. Since the implementation of TQM usually takes three to five years to permeate through the organization and fully takes effect, a set of longitudinal studies would be very helpful in studying the time dimension of TQM implementation. Furthermore, future studies should also be conducted from the students’ perception as students are the customers and they are the direct results of the quality of education. It is also recommended to organise symposiums at national level to bring awareness of the importance of providing quality education to students among educators of Private Secondary schools so that the private secondary education system can become dynamic and vibrant. Indeed, privately managed secondary schools should adopt TQM factors as it can change the education system to render better and quality performance.

ACKNOWLEDGMENT

We would like to show our gratitude to the all the school rectors and educators for their willingness to participate in this research and for sharing their pearls of wisdom with us during the course of this research.

REFERENCES

- [1] F. T. Bua and J. N. Ada, “Impact of total quality management on secondary education for natural transformation: The case of Benue North”, West Senatorial District of Benue State. Nigeria Journal of Education and Practice, 4 (20), 2013, pp 36–42
- [2] A. Chauhan and P. Sharma, “Teacher Education and Total Quality Management (TQM)”, The International Journal of Indian Psychology | ISSN 2348-5396 Volume 2, Issue 2, Paper ID: B00330V2I22015, 2015
- [3] G. B. Jidamva, “Understanding and Improving Quality of Secondary School Education. Conceptions among Teachers in Tanzania”, Abo Akademi University, 2012
- [4] N. A. S. King, “Investigation of Factors Hindering Quality Education in Secondary Schools in Mbeya, Tanzania”, International Journal of Learning & Development ISSN 2164-4063 2013, Vol. 3, No. 6, 2013
- [5] G.I. Lingham, “Preparing teachers for rural schools: An empirical evidence from a Fiji case”, Greener Journal of Educational Research, 2 (2), 1- 12, 2012.
- [6] M. Shadreck, “Quality Rural Secondary School Education in Zimbabwe: Challenges and Remedies”, Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS) 3(5): 768-774, 2012
- [7] I. A. Wani and H.K. Mehraj, “Total Quality Management in Education: An Analysis”, International Journal of Humanities and Social Science Invention, Volume 3 Issue 6, 2014, PP.71-78.
- [8] L.K. Ejionueme and A.O. Oyoyo, “Application of Total Quality Management (TQM) in Secondary School Administration in Umuahia Education Zone”, Journal of Education and Practice, Vol.6, No.27, 2015
- [9] N. Saberi and A. R. Romle, “The Implementation of Tqm with Service Quality From Students Perspective in Malaysian Public University”, Australian Journal of Basic and Applied Sciences, 2015, Pages: 50-56.
- [10] R.O. Oduwaiye, A. O. Sofoluwe and D.J. Kayode, “Total Quality Management and Students’ Academic Performance In Ilorin Metropolis Secondary Schools”, Nigeria, Asian Journal of Management Sciences and Education, Vol. 1. No. 1, 2012
- [11] H. M. Pour and K. Yeshodhara, “Total Quality Management in Education: Perception of secondary school teachers”, E-Journal of all India association for educational research, Vol. 21, No. 1, 2009
- [12] N. Zakuan, S. Muniandy, M. Z. M. Saman, M. S. Ariff, S. Sulaiman, and R. A. Jalil, “Critical Success Factors of Total Quality Management Implementation In Higher Education Institution: A Review”, International Journal of Academic Research in Business and Social Sciences, Vol. 2, No. 12, ISSN: 2222-6990, 2012
- [13] Z. L. Altahayneh, Implementation of Total Quality Management in Colleges of Physical Education in Jordan, International Journal of Business and Social Science Vol. 5 No. 3, 2014
- [14] P. Mishra and A. Pandey, “Barriers in implementing total quality management in Higher Education”, Journal of Education & Research for Sustainable Development, Volume-1, Online Issue-1, 2013
- [15] I. A. Wani, “Perception of Secondary School Teachers Towards Total Quality Management In Education”, International Journal of Humanities and Social Science Invention, ISSN (Online): 2319 – 7722, ISSN (Print): 2319 – 7714, Volume 3 Issue 6, 2014, PP.65-70.
- [16] S. Aina and O. Kayode, “Application of Total Quality Management in the Classroom”, British Journal of Arts and Social Sciences ISSN: 2046-9578, Vol.11 No.1, 2012
- [17] S. Batra, A. Shankar, and A. Kumar, “Total Quality Management in Secondary Education: Perception of Teacher in

- Meerut Region”, The International Journal’s Research Journal Of Economics and Business Studies, Vol. 01, No. 12, School Administration in Umuhah Education Zone”, Journal of Education and Practice, Vol.6, No.27, 2012
- [18] A. Farkhondehzadeh, M. R. R. Karim, M., Azizi, J. Roshanfekr, F. L. , Hatami, “Total Quality Management (TQM) in Iranian primary schools teachers”, European Online Journal of Natural and Social Sciences, ISSN 1805-3602, Vol.2, No.3 (s), 2013, pp. 634-640.
- [19] M. A. Nadi, N. Saeeidian, and Z. B. G. Abadi, “ The Relationship between Teachers' Perception of Management Skills with dimensions of Total Quality Management”, International Journal of Accounting Research Vol. 1, No.3, 2013
- [20] S. S. Zubair, “Total Quality Management in Public Sector Higher Education Institutions”, Journal of Business & Economics, Vol.5 No., 2013, pp. 24-55
- [21] A. Haque, A. Sarwar, and F. Yasmin, “Teachers’ Perception towards Total Quality Management Practices in Malaysian Higher Learning Institutions”, Scientific Research, Vol.4, No.9, 35-40, 2013
- [22] A. Shahin and R. Dabestani, “A feasibility study of the implementation of total quality management based on soft factor”, Journal of Industrial Engineering and Management, 4(2): 258-280 – Online ISSN: 2013-0953, 2011
- [23] M. Pourrajab, R. Basri, S. M. Daud, and S. Asimiran , "The resistance to change in implementation of total quality management (TQM) in Iranian schools", The TQM Journal, Vol. 27 Iss 5, 2015, pp. 532 – 543
- [24] G. Jamali, M. Ebrahimi and M. L. Abbaszadeh, “TQM Implementation: An Investigation of Critical Success Factors”, International Conference on Education and Management Technology, 2010
- [25] H. H. Taşar and M. Çelik, “Examination of Implementation Level of the Total Quality Management Principles by the Principals and Teachers Functioning at Elementary Schools: The Case of Adiyaman Province”, Asian Social Science Vol. 7, No. 9, 2011
- [26] W. E. Deming, “Quality, Productivity, and Competitive Position”, Cambridge, MA: Center for Advanced Engineering Study, MIT, 1982
- [27] P.B. Crosby, “Quality Is Free”, New York: McGraw-Hill, 1979
- [28] K. Hashmi, "Introduction and Implementation of Total Quality Management", iSixSigma, 2010
- [29] O. Ibrahim, “Total Quality management (TQM) and Continuous Improvement as Addressed by Researchers”, International Journal of Scientific and Research Publications, Volume 3, Issue 10, 2013
- [30] J.M. Juran, “Juran on Planning for Quality”, New York: The Free Press, 1988
- [31] S. M. Irfan, D. M. Hung Kee, R. W. Qureshi, and R., Hussain, “Identification of Critical Success Factors of TQM in Health Care Sector of Pakistan using Pareto Analysis Approach”, Sci.int.(Lahore),26(5),2603-2616, ISSN 1013-5316; CODEN: SINTE 8, 2014
- [32] V. C. Arumugam, R. Mojtahezadeh and C. A. Malarvizhi, “Critical Success Factors of Total Quality Management and their impact on Performance of Iranian Automotive Industry, International Conference on Innovation, Management and Service”, IPEDR vol.14, IACSIT Press, Singapore, 2011
- [33] A. Keramati and M. A. Azadeh, Exploring the Effects of Top Management's Commitment on Knowledge Management Success in Academic: A Case Study. Proceedings of World Academy of Science, Engineering and Technology, Vienna, Austria, May 2007, 292-297
- [34] V. Singla, D. Mittal and A. Goyal, “Comparison of TQM success factors in Northern Indian manufacturing and service industries: A survey”, International Journal of Engineering Science and Technology, Vol. 3, No. 2, 2011, pp. 1368-1377
- [35] S. Levitt, J. List, S. Neckermann and S. Sadoff, "The Behaviorist Goes to School: Leveraging Behavioral Economics to Improve Educational Performance," NBER Working Paper 18165, 2012
- [36] S. H. Sabet, Z. S. Saleki, B. Roumi, A. Dezfoulian, “A Study on Total Quality Management in Higher Education Industry in Malaysia”, International Journal of Business and Social Science Vol. 3 No. 17, 2012
- [37] N. Gherbal, A. Shibani, M. Saidani and A. Sagoo, “Critical Success Factors of Implementing Total Quality Management in Libyan Organisations”, Proceedings of the 2012 International Conference on Industrial Engineering and Operations Management Istanbul, Turkey, 2012
- [38] H. Pratasavitskaya and B. Stensaker, “Quality Management in Higher Education: towards a better understanding of an emerging field”, Quality in Higher Education, 16(1), 37-50, 2010
- [39] J. C. Ah-Teck and K. Starr, “Total Quality Management in Mauritian education and principals’ decision-making for school improvement: “Driven” or “informed” by data?”, Journal of educational administration, vol. 52, no. 6, 2014, pp. 833-849
- [40] N. A. Ali and M. Zairi, “Service Quality in Higher Education”, Bradford University School of Management, Bradford, 2005
- [41] A. M. Blankstein, Failure is not an option. Thousand Oaks, CA: Corwin Press, 2004
- [42] A. G. Picciano, Data-Driven Decision Making for Effective School Leadership. Upper Saddle River, NJ: Person, 2006
- [43] J. A. Ater, “Challenges Facing The Implementation of Total Quality Management Practices In Public Secondary Schools In Kenya”, 2011
- [44] M. M. Arshida and S. O. Agil, Critical Success Factors for Total Quality Management Implementation Within the Libyan Iron and Steel Company. Tun Abdul Razak University, Graduate School of Business, 2012
- [45] D. Cohen, "Qualitative Research Guidelines Project: Semi-structured interviews". New Jersey: Robert Wood Johnson Foundation, 2006
- [46] P. Ramseook-Munhurrin and P.Nundlall, "Service quality measurement for secondary school setting", Quality Assurance in Education, Vol. 21 Issue: 4, 2013, pp.387-401
- [47] C. J. Chimi and D. L. Russell, “The Likert Scale:A Proposal for Improvement Using Quasi-Continuous Variables”, Proc ISECON, v26 (Washington DC): \$4333 (refereed), EDSIG, 2009
- [48] I. Salaheldin, S. Fathi and M. S. Shawaheen, “Critical Success Factors for Total Quality Management implementation in Jordanian Healthcare Sector”, European Scientific Journal, vol.11, No.13 ISSN: 1857 – 7881, 2015
- [49] S. B. Merriam and Associates, “Qualitative Research In Practice: Examples for discussion and analysis”. San Francisco, CA: Jossey-Bass, 2002
- [50] J. Cohen, K. Saito and D. Entekhabi, “The role of the Siberian high in Northern Hemisphere climate variability”, Geophys. Res. Let., 28, 299 – 302, 2001
- [51] A. R. J. Briggs and M. Coleman, 'Introduction', in Briggs, A. R. J. & Coleman, M. (eds.) Research Methods in Educational Leadership and Management. London: SAGE Publications Ltd, 2007
- [52] S.A. Jamaa, The effectiveness of applying total quality management in Public Senior High School Kasihan 1 Bantul, Yogyakarta Indonesia. Journal of Education, 3 (1), 25-35, 2010
- [53] S.E. Jorgensen and S.N. Nielsen, The properties of the ecological hierarchy and their application as ecological indicators. Ecol. Indic. 28, 48–53, 2013
- [54] F. Ferdousi and S. Shabnam, Practices of TQM in the Garment Sector of Bangladesh-An Empirical Investigation, Center for Research and Training, 2013
- [55] M.S. Abolarin, A.A. Abdullahi, O. Adedipe and T.S. Abdulrahman, “Impact of Top Management Commitment on Implementation of Total Quality Management in an Organization”, Pacific Journal of Science and Technology, 14(2):263-267, 2013
- [56] A. Gul, S. A. S. Jafery, J. Rafiq and H. Naeem, “Improving Employees Performance Through Total Quality Management”, International Journal of Economics and Management Sciences, Vol. 1, No. 8, 2012, pp. 19-24.
- [57] F. Talib, Z. Rahman and M. N. Qureshi, “Analysis of interaction among the barriers to total quality management implementation using interpretive structural modelling approach”, An International Journal, Vol. 18 No. 4, 2011, pp. 563-587, Emerald Group Publishing Limited.
- [58] K. S. Bhat and J. Rajashekhar, "An empirical study of barriers to TQM implementation in Indian industries", The TQM Journal, Vol. 21 Iss: 3, pp.261 – 272 Blankstein, A. M., (2004), “Failure Is Not an Option: Six Principles That Guide Student

Achievement in High-Performing Schools”, HOPE Foundation/Corwin Press, Thousand Oaks, CA, 2009

- [59] G. Polat, A. Damci and Y. Tatar, “Barriers and benefits of Total Quality Management in the construction industry: Evidence from Turkish contractors”, 7th Research/Expert Conference with International Participations, 2011

AUTHORS’ PROFILES



Teena Gomes was born in Mauritius, in 1985. She received the B.Ed (Hons) degree in Sociology and the M. sc. degree in Educational Administration and Technology from the University of Technology, Mauritius, in 2012 and 2015 respectively. She was awarded the Teacher’s Diploma for Secondary in Social Sciences in 2010 from Mauritius Institute of Education, Mauritius. She received the International Diploma in Computer Studies majoring in Computer Programming and International Advanced Diploma in Computer Studies majoring in Internet Systems from NCC Education, United Kingdom, in 2007 and 2008 respectively. In 2012, she joined St Helena’s College as Sociology Educator and Head of the Social Studies and Sociology Department. Her main areas of research interest are Education and management and Education and Technology.

Dr. Shireen B. Panchoo was born in Mauritius. She received the B.Eng. (Hons.) degree in Computer Science & Engineering from the University of Mauritius, Mauritius in 1998, the Master degree (DESS) in the use of Information and Communication Technologies for Education and Training from L’Université de Louis Pasteur Strasbourg 1, France, in 2003 and Phd. in Information and Communication Technologies (ICT) in supporting distant learners from L’Université de Cergy-Pontoise, Paris, France in 2010. She was awarded the Diploma in Computer Science from University of Mauritius, Mauritius in 1996. She received the Advanced Certificate on Curriculum Design and Instructional Material Development from National Institute of Technical Teachers Training and Research, Chennai and the Project Leadership Certification from University of Technology, Mauritius in 201. She joined the University of Technology, Mauritius in 2000 as lecturer for the school of Business Informatics and Software Engineering (now renamed as School of Innovative Technology and Engineering). She was appointed Head of Department in 2012 and is now a Senior Lecturer. She is an online tutor at l’Université de Cergy-Pontoise, Paris, France, for Masters Course (M2) and Supervision of final year projects and University of Louis Pasteur, Strasbourg, France. She was Head of Department, Muscat, Sultanate of Oman, from 2007 to 2009 where she headed and established an e-learning system (blended system) at Higher College of Technology, Muscat (Government owned Tertiary Institution). She was the IT Lecturer at Sitrac Ltd from 1998 to 2000.