IBSU
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A Framework for Implementation of Total Quality Management in Georgian Higher Education Institutions in the Context of International Black Sea University

Mehmet Murat Erguvan

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Scientific Supervisor: Nikoloz Parjanadze

(full name)

(Assoc. Prof. Dr. at International Black Sea University)

(academic title)

(supervisor's signature)

Experts (full name & academic title):

1. Prof. Dr. Natela Doghonadze
2. Prof. Dr. Ekaterine Pipia

Opponents (full name & academic title):

1. Dr. Joanne Waterhouse (Joanne Caitlyn Kiff)
2. Assoc. Prof. Dr. Irine Darchia
3. Assoc. Prof. Dr. Irma Barbakadze

(if any)

INTRODUCTION

"Total Quality Management is a comprehensive and structured approach to organizational management that seeks to improve the quality of products and services through ongoing refinements in response to continuous feedback." (Mills, Bratton, & Forshaw, 2006, p. 581).

World War I marks the period when a set of quality control methods were put into action that would eventually lead to the development of Total Quality Management (TQM). Juran and Gryna (1980) mention that the goods produced during the time of War were of very low quality because most of the companies moved their focus from the 'process' to the 'product'. Factory workers who lacked due experience had to produce large amounts of goods and products under pressure which naturally yielded in poor results. This is when the quality inspectors came to help to prevent errors on the production band. The main goal was to minimize the faults in the products, or 'Gemba', a term in Japanese used to refer to workplace (Imai, 1997, p. xv) where the real action takes place.

Quality control and inspection spread out at a larger scale in production and industry afterwards, which was followed by the introduction of Statistical Quality Control (SQC), a theory that was offered by Shewhart and then developed by MIT's Dr. W. Edwards Deming (Walton, 1986, p. 8). Dr. Deming was coming from an engineering background, and SQC relied on statistical data based on sampling.

TQM inspired major quality awards (e.g. Deming, MBNQA, and EQA) to design their systems with the TQM principles acting as main pillars (Sirvanci, 2004, p. 382). This is why this study focuses on the applicability of TQM in HEIs, though the term is now losing its once glamorous effect in the business world, leaving its place to new trends such as Six Sigma, and Lean, but the basic idea remains the same: continuous improvement.

There is a paradigm shift in HE from *elitist* to *mass* production (Sarvan & Anafarta, 2005, p. 2). The quality focus is now more on the quantitative aspects, such as number of students, rating topics, and facilities due to quality assurance requirements, but qualitative issues that require long-term investment are usually neglected. For instance, in order to understand how well the learning outcomes were designed in the curriculum, one needs to look at the employment rate and satisfaction level of the graduates.

It is not relevant to speak of a standard mechanism that checks with the 'process' at a low-performing program, for instance. When we decide that a student fails to meet the passing criteria

or declare that a program fails to meet 'standards', the tendency is to use basic numerical data collected within the institution through tests, survey results, and the like rather than the process(es) that leads the way to bad results. However, less attention is usually paid to individual needs possibly due to insufficient resources, lack of training, absence of relevant methodology, and compulsory mass education practices. Training is habitually ignored for faculty members who directly start teaching after recruitment and learn how to teach on the job.

Student satisfaction is a common concept that is excessively discussed, but not much practiced. Gradually, universities pay more attention to promoting individual research outcomes, but what about collective learning outcomes? How many universities in the developing world have succeeded in aligning the education they offer with their students' employability skills? Is there an established mechanism that bridges the gap between the university education and the market needs?

Total Quality Management approach can address those issues and prepare the HEIs for quality certifications that would equip them with the ability to sustain the good practice accumulated as well.

Problem Statement

The HEIs in Georgia, let alone the global ones, find themselves surrounded by more challenges each year. Despite all the reforms, teaching/learning and management quality still remains a problem (Salmi, 2015). Doing the things in the same way over and over again will certainly not yield any kind of improvement. Without implementing a more relevant management philosophy in place, the HEIs will be going around in circles. Having been favored by many educational institutions world-wide, total quality management principles look promising in this regard. What we need to know is if and how TQM (backed up by several case studies in the world) is applicable to HEIs in Georgia.

Goal Statement

The study aims to (i) focus on major quality models; (ii) analyze the best practices of TQM applications in HEIs in the world based on available case studies; (iii) examine the existing situation of QA system at several HEIs in Georgia; (iv) understand what International Black Sea University has acquired in its quality management efforts; (v) find out about critical success factors

in change management; and (vi) carry out a gap analysis between the current status of the management system(s) at several HEIs and the ISO 9001:2015 Standard requirements.

Therefore, the goal of this research is to discover the possibility of applying total quality management philosophy to the higher education setting in Georgia by analyzing the current QA systems in HEIs, the case of International Black Sea University, and identifying the gap between the current systems and ISO 9001:2015 Standard requirements.

Research Questions

1. What is quality, and quality in higher education?
2. What are the renowned quality models in the world?
3. What are the main factors that influence quality of higher education?
4. What are the best practices of TQM applications in HEIs?
5. What are the critical success factors for TQM implementation in Georgian HEIs?
6. Will the current QA system in place help with ISO 9001:2015 implementation?
7. What is IBSU's experience in preparing for ISO 9001:2015?
8. What is the gap between ISO 9001:2015 Standard and the current systems in HEIs?
9. How can an efficient TQM framework be rendered?

Research Objectives

1. Studying the concept of quality and understanding of the concept of quality in HEIs;
2. Learning about and comparing the views of the quality gurus;
3. Comparing the main quality models;
4. Understanding who the customers and stakeholders of HEIs are;
5. Finding out about main factors that influence quality of the higher education in literature;
6. Studying a set of case studies carried out in other countries and research output on TQM implementation in HEIs so far;
7. Performing a set of surveys and interviews at several HEIs to identify the critical success factors;
8. Finding out about the quality assurance system in Georgia;

9. Carrying out a case study to understand the nature of IBSU's efforts after the TQM office was set up;
10. Performing a gap analysis between ISO 9001:2015 Standard and the current systems in HEIs via observations, surveys, and interviews;
11. Offering a framework for TQM implementation in Georgian HEIs based on literature review, case study, and gap analysis

Novelty and Actuality

The first stage of quality assurance system was introduced in Georgian HEIs in 2005, the second stage in 2010, and the third stage is being expected to come into existence in 2016. On top of the legal requirements within the QA framework, International Black Sea University has taken a decision to obtain an internationally recognized quality management certification in order to align its management practices with the modern approaches in quality management.

Application of the quality management principles is the key towards earning a QMS certificate. Therefore, it is of vital importance for IBSU to work towards this aim at the institutional level. There are currently no private HEI in Georgia with a QMS certification institution-wide, and none of the HEIs has been certified with ISO 9001:2015, nor adopted a TQM approach.

Significance of the Problem

Recent national, regional, and global developments urge the universities to be more competitive year by year. Authorization and accreditation requirements set by the government become harder, and the ratings & rankings impel them to take up modern management approaches to be able to survive through the national, regional, and global competition.

Therefore, a quality framework must be developed for the Georgian HEIs not to be held back in the fierce competition and easily adapt into continually hardening and changing requirements.

Practical and Theoretical Value

ISO 9004 defines TQM as "a management philosophy and company practices which aim to harness the human and material resources of an organization in the most effective way to achieve the objectives of the organization" (as cited in: Ho & Wearn, 1996, p. 35).

Total quality management in higher education advanced from the US approach of TQM in business that generally views quality as the attributes of a product or service. TQM in higher education naturally replaces the 'product' with the educational one, especially the 'student' in a broader sense in the system.

In order to formulate a framework and/or model for the implementation of TQM in the HE environment, we relied on the TQM theories developed by Deming, Juran, Feigenbaum, Crosby, and Ishikawa who pointed out to various sides of quality and quality systems in their works. Researchers heavily utilize their work, and accept these names as the quality gurus. (Total) Quality Models, such as ISO 9001:2015, Kaizen, EFQM, and Malcolm Baldrige were analyzed to make an attempt to reach a synthesis of the theories and quality models studied with a specific focus on ISO 9001:2015.

The study therefore offers a TQM road map, a conceptual TQM framework, and develops a framework for TQM implementation in Georgian HEIs. The study may be useful for HEIs in Georgia that would like to earn an international quality certificate as a means to support their quality efforts carried out in their official QA work, and aim for international program accreditation when the educational legislation allows.

Research Methods

Both qualitative and quantitative methods were used in this study. As for the qualitative paradigm, case study method, qualitative interviews, and observations were utilized. The quantitative paradigm included the survey method, document analysis, and statistical analysis of primary data.

Structure of the Dissertation

This dissertation consists of an introduction, five chapters, and a section for conclusion and recommendations.

Chapter I offers an exhaustive literature review on the definitions and perceptions of the quality concept through history, quality models, total quality management roots, and quality gurus.

Chapter II looks into the studies made on total quality management in higher educational institutions, barriers and critical success factors that play a significant role in the implementation of TQM in HEIs, case studies from eight different institutions, and TQM models for HEIs.

Chapter III provides information about the research context (higher education system in Georgia, the quality assurance system in Georgia, and the case of International Black Sea University), as well as the details of the research methodology applied in this study.

Chapter IV discusses the research findings from the data analyses of the structured and semi-structured formal interviews, observations, the case study, the CSF results, and the gap analysis.

Chapter V offers recommendations about how TQM can be applied in HEIs in Georgia under the light of the data gathered in the previous chapters, and attempts to draw a conceptual framework as well as a framework for TQM implementation.

The Conclusion and Recommendations section encompasses the general findings discussed in this research offering recommendations for implementation and suggestions for further study.

Appendices contain extensive versions of the information discussed briefly within the main body of this dissertation as well as few samples of QMS documentation at IBSU. It also includes an index section to alleviate finding the main terms used in the study. The References were divided into sub sections in the Appendix as well to make it easier for the reader to identify which resource was used for which purpose.

Summary of Chapter I

Quality is a very vague term. Depending on the period of time, needs, and culture, the aspects of quality change: exception, "perfection or consistency, fitness for purpose, value for money and transformative" (Dahlgaard et al., 2008; Harvey & Green, 1993). The so-called stakeholders in quality appreciation play the major role which quality aspect to pick up.

The quality gurus (Deming, Juran, Feigenbaum, Crosby, and Ishikawa) contributed to the development of quality management principles, and helped formulize the quality models appeared last century, including the ISO 9001:2015 which is the main quality model chosen for TQM implementation for HEIs in this study.

Summary of Chapter II

Total quality management was proven to be successful model in the business world; that is why other sectors endeavored to adopt the system into their organizations. Applications of TQM in higher education started to appear in 1980s, and there have been many case studies made about its

advantages and disadvantages. The studies point to a set of critical success factors, as well as barriers in TQM implementation. A group of TQM models were discussed in this chapter, along with specific TQM models offered for HEI settings.

We tried to make a summary of elements utilized in TQM models offered for HEIs by individual researchers. A table that shows commonalities among researchers can be found in Appendix 9 of the dissertation. The elements are found to be revolving around the basic TQM principles.

Summary of Chapter III

The chapter discusses higher education institutions in Georgia and the QA system that is currently in existence. Then, the research methodology is discussed in detail. The study follows a blended approach with qualitative and quantitative methods along with a case study. The case study looks at the developments at International Black Sea University after the TQM Office was set up two years ago. IBSU improved its rules and regulations, devised an activity plan – report system, started to redesign its jobs, and is getting prepared for ISO 9001 certification. The drawbacks, however, were the increasing amount of paperwork, some cases of staff indifference or unwillingness to collaborate in TQM work, and lack of software development at the desired level to help overcome the paperwork issue.

The chapter also includes design details of structured and semi-structured formal interviews, and their interaction with the interviews designed for validity and reliability of them.

Summary of Chapter IV

Research findings covered results of observations, structured surveys, semi-structured formal interviews, and the case study. It is worth noting here that after the survey analysis, we came to the conclusion that the following factors play a significant role in the possible deviation of answers:

1. Surveys are usually perceived as an additional and unnecessary load.
2. A group of people believe that surveys will not produce noticeable outcomes.
3. Some others have concerns for their privacy.
4. There are some who wait for a reward for filling in the survey (Erguvan, 2015).

With regard to the population: 325 surveys were collected, and 15 interviews were made at HEIs, Ministry of Science and Education, and National Center for Educational Quality Enhancement. The surveys covered 33 relevant areas of ISO 9001:2015 Standard for a HEI setting. We attempted

to cross check and compare the results to other survey items, and semi-structured formal interview outcomes. As a result, we witnessed that the current QA system devised by the EQE and the MoES formed a sound basis for quality development at HEIs, and that the ISO 9001:2015 can be based upon the current system, paving the way towards TQM.

The case study presented information about IBSU's quality journey at its very early stages. IBSU kept itself busy with developing instructions, charts, lists, forms, rules and regulations to lay the foundation for a comprehensive process identification procedure. It was assumed that piloting the forms would help determine the process components and workflow in fine detail, which was really the case. The next step will be translating these forms into an electronic platform; otherwise, too much paperwork may hinder TQM efforts. IBSU updated its vision, mission, and the quality policy, developed the institutional website, improved job descriptions, and identified main and some sub-processes despite the short period since its inception. What we witnessed in the Gap Analysis was that the Quality Assurance system in Georgia has been successful in raising awareness about quality issues, PDCA cycle for improvement, and identification of stakeholders of the HEIs. However, the evidence or documentation was found to be missing most of the time. What we mean by missing evidence is not the official QA documentation (because they were all in place), but the lack of the analysis of the information collected. The ISO 9001:2015 can bring about radical changes in the field of analysis and help redesign the QA system that can then start to produce tangible results.

Summary of Chapter V

The literature review suggested that there are numerous TQM models for HEIs to develop a TQM implementation framework for HEIs in Georgia. Based on our findings, we selected Kaizen as the TQM philosophy, and ISO 9001:2015 as the QMS model to develop a TQM implementation framework on top of the existing QA platform as a legal requirement. We attempted to provide simple structures for our proposed conceptual and implementation frameworks which were followed by more detailed tables to explain what we mean by each step in them.

DEVELOPING A TQM MODEL FOR HE in GEORGIA

We made a gap analysis comparing the ISO 9001:2015 Standard requirements to the current situation in HEIs as perceived through surveys, interviews, and observations. We included all the relevant articles of the Standard in the gap analysis. We also looked at the 13 CSFs obtained from the literature review and tried to rank them in accordance with the degree the participants identified as problematic.

Having analyzed the previous research on TQM implementation frameworks, Yusof and Aspinwall (2000, p. 293) believe that a framework should be systematic and easily understood, have a simple structure, possess clear links between elements which are presented, be general enough to suit different contexts, represent a road map, answer 'how to?', and not 'what is?' TQM, and be implementable. Venkatraman adds that a framework should be built upon a set of core values and concepts (2007, p. 100).

In order to offer a framework for HEIs in Georgia, we have to take the current QA requirements into consideration. The QA has already recommended the HEIs to follow a PDCA cycle for improving their educational services, which is a great asset for TQM implementation faster.

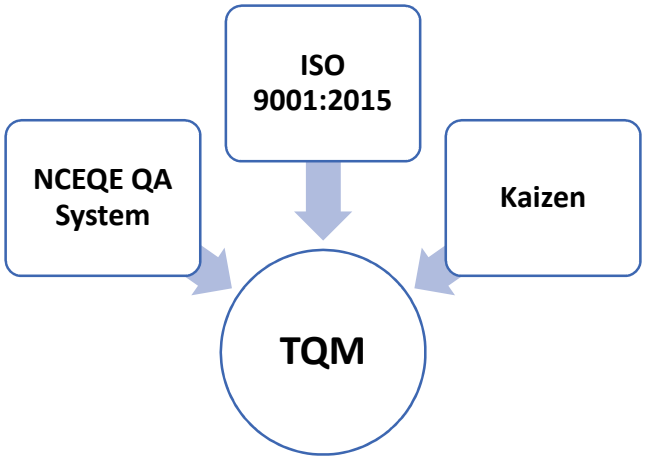
We believe ISO 9001:2015 will help management of HEIs in their TQM efforts. We have to mention Kaizen here as well, because ISO 9001:2015 is compatible with the Kaizen philosophy. Especially the article 5.1.1 of ISO 9001:2015 requires the management to follow a more *hands-on* approach; thus, asking the management to pay more visits to the places where the real action takes place, and carry on with their continual improvement activities from there. Kaizen thinking also seems necessary to eliminate the possible excessive paperwork produced in the QMS process.

We offered a framework and recommendations for TQM implementation at HEIs in Georgia based on the literature review, results of the gap analysis, results of the CSF analysis, and IBSU case study.

Systems Utilized for Developing the TQM Framework

Figure 1 provides the systems we considered while developing the TQM framework for Georgian HEIs.

Figure 1 Systems Used for Developing the TQM Framework

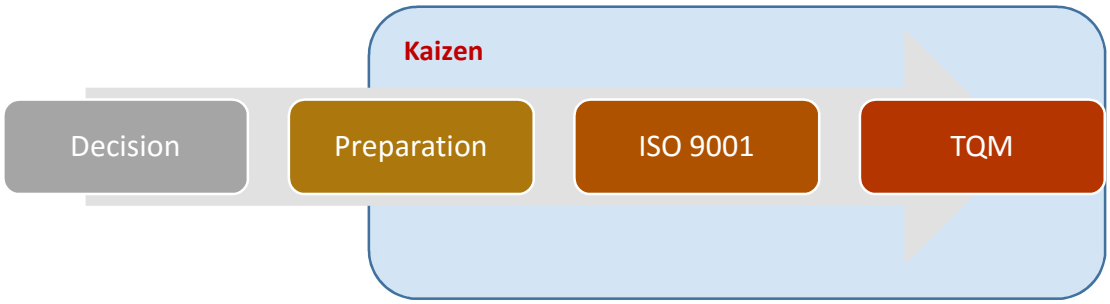


Developed by the researcher

QA System of Georgia: ISO 9001:2015 follows the process approach which is compatible with the current QA system at HEIs.

Kaizen: ISO 9001:2015 provides a good platform for the TQM philosophy to be applied. We chose Kaizen as the TQM model that would create and sustain the motivation behind the TQM philosophy in the HEIs. Kaizen offers a 5S model, in which each 'S' refers to a principle. The '**S**ort' principle of 5S approach of Kaizen can really assist in identifying and disposing the QMS materials that are no longer needed. '**S**tandardize' works well with the process improvement philosophy of ISO 9001. '**S**traighten' inspires HEIs to make the right tools and documentation easy to find whenever they are needed. '**S**hine' encourages transparency and cleanliness, and '**S**ustain' motivates continual improvement. Therefore, a possible ISO 9001:2015 implementation promises to be a big step forward towards TQM.

Figure 2 TQM Road Map



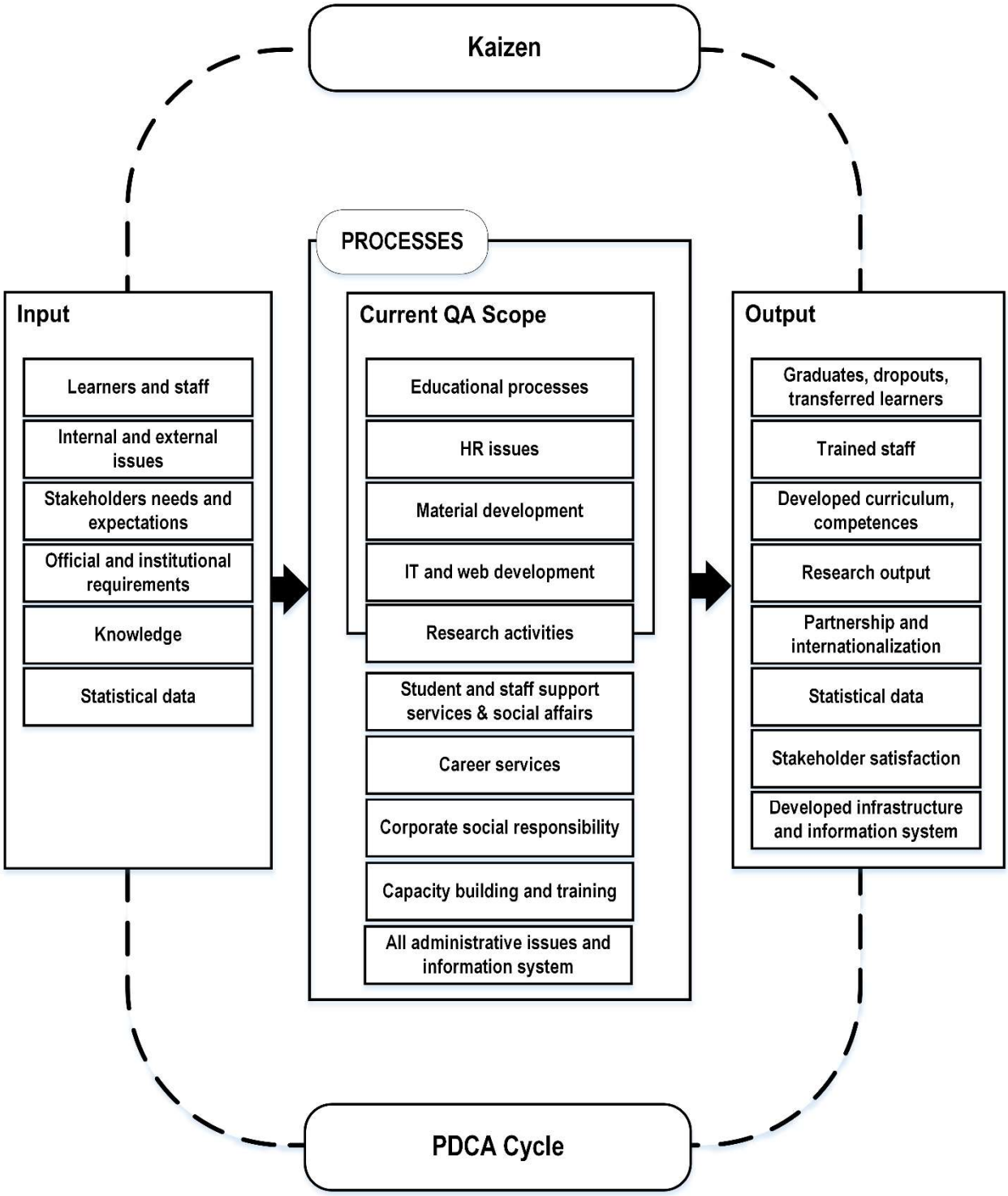
Developed by the researcher

Figure 2 depicts our proposed road map for TQM with all the required actions packed into 4 stages. Decision stage covers the needs analysis, TQM exploration, small-scale training, and strategic planning; preparation stage includes training for the implementation team, institutional self-assessment, and internal audit; ISO 9001 covers the university-wide training, process identification, establishing statistical process control, and the certification process, after which a set of attempts are made to make TQM institutionalized. Kaizen philosophy covers part of the preparation stage in the figure, because people need training to understand and start to apply Kaizen. Otherwise, the philosophy never ceases to exist throughout the process.

Figure 3 provides our proposed conceptual framework. The framework consists of a typical process diagram: input, process, and output. In short, the input is composed of people, official requirements, internal and external issues, and information. The process consists of education, administrative and organizational issues, research, student and staff support services, HR, corporate social responsibility, and developmental issues. The output covers people, competences, research output, networking, information, and developed infrastructure. Table 1 offers detailed information about the items in the conceptual framework the items of which were analyzed during the literature review, the case study, and the gap analysis.

Figure 4 and Table 2 offer the proposed TQM implementation framework in 14 steps which are divided into 5 phases: decision, preparation, implementation, certification, institutionalization. Certification, which is the fourth phase, is not an obligatory phase; however, opting for certification can positively affect an institution towards applying the QMS requirements to a great extent.

Figure 3 Conceptual TQM Framework



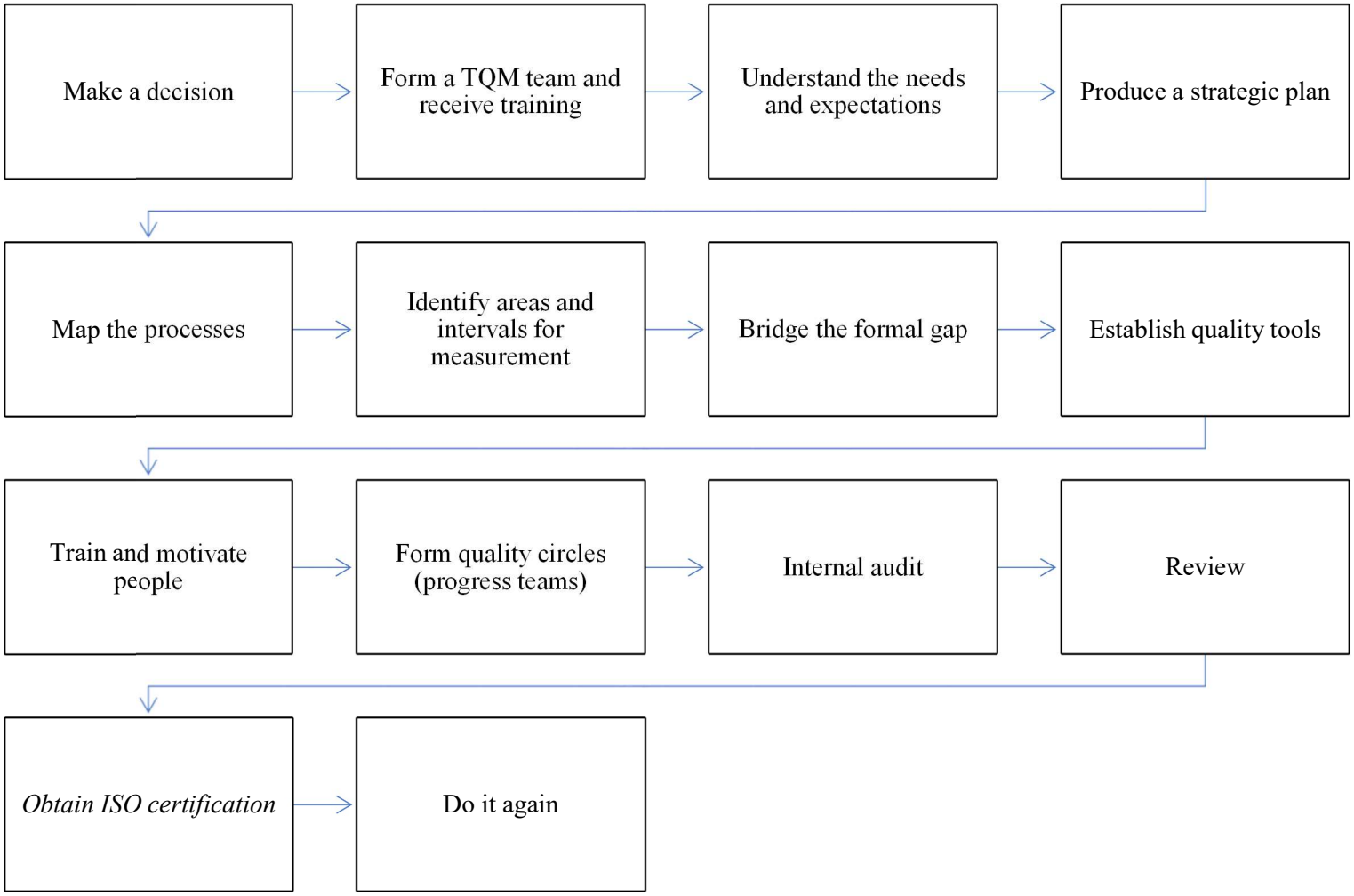
Developed by the researcher

Table 1 Conceptual Framework in Detail

INPUTS		PROCESSES		OUTPUTS	
Internal and external issues	Institutional self-assessment, CSF focus, vision, mission, quality policy, values, and strategic planning	Educational processes	Teaching and learning, curriculum building	Meeting or exceeding expectations	Satisfied learners, staff
People	Learners: Degree seeking, lifelong learning, individual course takers, exchange, transfer, interns, guests	Capacity building	Career services, career planning (through related courses and office work)		All other stakeholders
	Staff: teaching, administrative, auxiliary, visiting, exchange, contracted		Internal and external certified or non-certified trainings	Value added people	Graduates with degree, graduates with certificate, exchanged students, interns; trained staff, exchanged staff as well as other relevant people involved in all processes
	Visitors and guests		National, regional, and international projects	Curriculum	Developed curriculum, achieved learning outcomes, acquired competences, gained employability skills
	All other stakeholders	Research activities	Post-graduate education	Research	Research output
Knowledge	Organizational knowledge		Scientific events for everyone	Partnerships	Expanded network & increased internationalization
	Lessons learned, data analysis		Scientific centers and projects	CSR	Increased
	National, regional, global trends	Student and staff support services	Social affairs	Quality results	Economic contribution to the society
	Literature		Student clubs		Improved quality
Official requirements	Legal requirements	Institutional and administrative issues	Infrastructure & EIS development		Achieved goals
	QA recommendations		CSR (corporate social responsibility)		Statistical data
Institutional requirements	ISO 9001:2015 requirements		Networking		Lessons learned
			All other management processes		Developed infrastructure
Quality improvement	Kaizen Quality Assurance ISO 9001:2015				

Developed by the researcher

Figure 4 TQM Implementation Framework – Main Steps



Developed by the researcher

Table 2 TQM Implementation Framework in Detail

Stage	Action (first time / subsequent)	What	How	Remarks
Decision	Make / revise	Decision	A small team explores if TQM approach is beneficial for the institution and if the Rectorate sees the need, it communicates its TQM intention at the academic and administrative boards	Stakeholders will have to be informed about TQM at different stages, levels, and as appropriate
Preparation	Form / update	TQM team	Rectorate assigns the head of the team, allocates HR, budget, office space, and equipment, and empowers the TQM team; then the TQM team, top management, and senior management receive training	The team consists of experienced people with the most possible impact factor at the HEI, as well as software developers
	Analyze / update	Needs and expectations	The team performs surveys, interviews with the stakeholders, and produces a SWOT analysis for strategic planning	The team consists of people with relevant skills, and the surveys are offered to the relevant parties
	Produce / update	Plan	The team performs resource and risk analysis, and self-assessment identifying the gap between the current management system, the QA system, and the ISO 9001:2015	by revising vision, mission, values, and quality policy, organizational chart, and the rest of the administrative issues, the team produces quality objectives and KPIs
	Map / revise	Processes	The team goes through the QMS documentation at the HEI, visits offices, makes observations, and identifies the main and sub process at all units as well as the possible barriers and degree of the CSFs.	The team will only be able to do a general analysis at this stage. Important areas are: job design, job descriptions, processes, interaction among the processes, stakeholder and supplier relationships, and meeting management.
	Identify / update	Measurements	The team identifies general areas for measurement and the corresponding quality and statistical tools for analysis cooperating with the software development team to produce a platform for data entry and analysis	Activity plans and reports should be developed accordingly
	Perform / update	Formal gap analysis	The team collaborates with the relevant offices to bridge the formal gap in terms of QA and ISO requirements, institutional documentation and fundamental supporting systems	such as missing regulations, reward and recognition system, and any kind of other resources.
	Establish / revise	Quality tools	The team identifies tools to help with problem solving	The tools can be selected from Kaizen, Six Sigma, and TQM tools as relevant

Stage	Action (first time / subsequent)	What	How	Remarks
Implementation	Provide	Training	The team offers adequate number of trainings and workshops about the planned QMS system, ISO 9001:2015, Kaizen, and TQM to everyone including students and other stakeholders at different levels	Rigorous trainings should not be offered before the basic system is in place. The idea should be to create the excitement and never let it cease. People should understand the TQM philosophy and their role in the overall quality at the HEI.
	Form / update	Quality circles	The quality circles revise processes and produce improvement plans	Though an old-looking term, we preferred quality circles in this study. Instead, any other term can be used, such as team, quality team, change agents, quality progress team, quality council, etc.
	Perform	Auditing	The quality circles visit certain offices / units	Results are first discussed within the unit and brought to the TQM team only if the problems require broader attention
	Review	Improvement	The Rectorate organizes regular review sessions	This is the 'A' in the PDCA cycle where the top management reviews the system and takes decisions about improvement
Certification	*Obtain / renew*	*Certification*	*The Rectorate applies to the certifying body for certification*	*HEIs don't have to obtain ISO certification, because any institution can declare that they follow ISO 9001:2015 QMS without certification; however the certification process act like an external authorization, and thus will be helpful in meeting the QMS requirements (although Deming believes the opposite in his 3rd principle)*
Institutionalization	Applying the Kaizen philosophy and seven quality principles of ISO 9001: Carrying on with the PDCA cycle and quality tools, communicating the TQM philosophy in different formats to the stakeholders; appreciating people for their contribution to the system.			

Developed by the researcher

Limitations

Any research has the risk of suffering from limitations, and this study is not an exception. The topic mentions the country of Georgia; we could only address the topic with attempting to generalize the Quality Assurance system that exists at all the authorized HEIs by performing research in 8 cities and 16 HEIs. Despite the standard requirements of QA, every institution has its own culture and leadership system; accordingly, we should have involved more in this sense. However, this could require a country-wide internal audit, something which an individual cannot cope within the scope of any dissertation.

The other limitations can be summarized as follows: Difficulty in accessing data in all the HEIs in the country; doing the case study in its own natural course which had its ups and downs; time, as the research topic requires an observation process of a longer period (5-10 years as the literature suggests); interviewing English Language speakers mostly; possible translation loss while translating the responses in open-ended questions from Georgian to English; interviewing mainly the top and mid-management; a generally negative attitude towards surveys; issues of sincerity, time restrictions, understanding of the topic during the interviews and surveys: the fact that some people perceived the study as an inspection on their system and covertly showed resistance to reveal the real information; difficulty in accessing evidence for the items discussed during interviews/surveys;

CONCLUSION and RECOMMENDATIONS

Conclusion

Winn and Green (1998) offered valuable insight on their experience in which they attempted to implement TQM into their department at the Air Force Academy many years ago. They admitted that they faced no opposition for implementing the system at the institutional level, although it was not likely to have a consensus among all the faculty members. They were lucky in the sense that all the positions in the chain command agreed to apply TQM. They used Deming's 14 principles with adaptations, and offered suggestions for implementation at the end of their article. Their suggestions point at the importance of the mission, philosophy, identifying areas for development, long-term plans, constant improvement, training, leadership, and job security. Michael et al. (1997) were successful in gathering the TQM experiences of the HEIs into their work public when many institutions were in their TQM discovery stages. Since their time, many studies were done on TQM in the HEI setting, offering beneficial results for us to follow.

On top of their valuable suggestions, we would like to extend the list of recommendations, offer more details for possible TQM implementation in the Georgian setting, and elaborate on our experience at International Black Sea University about if/how to implement the total quality management system at higher education institutions in the country. We touched the issues of why we need to improve quality at HEIs, along with the barriers of TQM implementation in the literature review.

We already provided some recommendations when we performed the gap analysis; therefore, the points here will touch some general issues.

Recommendations

Patience: TQM journey will be a long one. HEIs should be prepared to sustain the preparations and implementation efforts for at least 5 years. Therefore, the TQM team/office must be embedded in the Rector's Office, and in relevant regulations in a way that any possible changes in the Rectorate should not influence the TQM work.

Problem-solving approach: Repeatedly asking the question 'why' should lead the people at the times of crisis to find out a way that will show them the solutions to problems. 5 Whys method can be used as the basis for problem-solving (such as Toyota's scientific approach - Gobetto (2014)). Asking the question why many times leads to substantial results in problem solving.

Self-improvement: It should not be forgotten that motivation can be kept high by addressing individual needs and providing trainings to staff members for capacity building (including survival, love, power, fun, and freedom needs offered by Glasser (1990). Self-improvement leads to a win-win situation where both the individuals and the institution gain. Sustainability and continuous self-improvement are among the modern higher education policies. Universities cannot survive without these tendencies.

Electronic platform: Good management requires data analysis. Data on paper usually stays there forever without contributing to institutional memory. **Error! Reference source not found.** on page **Error! Bookmark not defined.** provides possible software development areas for HEIs that are willing to improve their information management systems. Developing an electronic platform for handling all major activities and data is crucial for TQM success.

Communication: The TQM team and the Rectorate should inform the people about the TQM developments regularly. Lack of communication can lead the people to think that the TQM efforts failed and thus cause them to lose their motivation.

People should be able to report on any flaws or improvement suggestions during an ongoing process, and the institution should be capable of handling these suggestions as well as introducing corrective actions immediately.

The issue of communication is also important in maintaining institutional memory. For this reason, document management systems are great assets. A position-related (not person-related) email system can alleviate the sustainability of internal and external correspondence to a great extent.

Project management: TQM journey is in fact a project. HEIs may include the topic of project management in their list of trainings, mainly for the core team.

Team(s): The quality team should consist of people who know the institution well and belong to different departments. The academic ranking and/or position is theoretically not important, although higher ranking staff members are supposed to be more knowledgeable about the processes than the others; besides, they can act immediately when required. It is crucial to have people with good IT skills, understanding of database structures, student related processes, quality tools, and project management skills as explained above. Suggested skills, positions, and/or areas to include in the team are software development, HR, post-graduate education, general educational process, Chancellor's office, and student and support services. The more, the better, however, too many people can make the process lag.

The quality circles should also consist of people who are open to quality improvement and can find the time to collaborate on quality improvement efforts. Anybody who cannot make any contribution due to lack of time should be taken off the team and substituted with a new person. The quality circles can consist of people with different ranks and positions because what is needed is to improve the processes at every angle possible.

Institution-wide approach: We generally tend to focus on the educational issues, but may neglect some administrative positions such as receptionists, security staff, phone operators, student affairs officers, etc. where most of the 'customer' interaction takes place. Problems faced here directly influence the satisfaction of customers, such as a parent who cannot reach the HEI on the phone,

a visitor who has been mistreated at the security, a student whose valid requests are not met at the Student Affairs in time, etc. That is why the TQM is there to cover all activity areas.

Meeting management: Meetings may prove to be ineffective if people do not come prepared, nor the results are disseminated efficiently. There are surely many factors that affect meeting efficiency. A list of recommendations for meeting management was provided in **Error! Reference source not found.**.

Process Approach: Process approach is highly emphasized in ISO 9001. As a matter of fact, all our activities consist of big or small processes connected to each other. HEIs face complications due to lack of efficient process definitions, but not because of people. Process identification/definition may sound easy, but without proper planning and the right piece of software, it is almost impossible to tackle the issue. A typical process approach can be used to start identifying the processes and connecting them to each other within the overall picture that **Error! Reference source not found.** on page **Error! Bookmark not defined.** offers as a template.

Amount of QMS documentation: We believe the each and every task should be documented for standardization; however, the *interface* for the involved parties to access the documented information/definition for each task should be user-friendly. Nobody likes to go through a hundred pages to find out how to make a single photocopy, or ask for a pen, for instance. Therefore, information systems are definitely required to address the issue of performing processes easier and without waste. At this point, flowcharts or infographics can come to help in explaining a process better thanks to their visual impact rather than a document full of text.

Resources: The longer the planning phase, the more successful the work will be. Quick starts without proper planning end very quickly. Therefore, TQM work should not start without management's commitment first, assuming that they know for sure to what they are getting committed. It should be the first exploratory team's job to understand if TQM can be initiated at a specific HEI or not.

Control: The managers need to get down to the workspace where the real action occurs. For this reason, observations will play an important role in the process improvement. Surveys can also be used to understand 'customer' satisfaction; however, without interviews and observations, surveys alone can yield false results.

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Demir, A., Eray, O., & Erguvan, M. M. (2015). How non-technical dimensions of service quality effects satisfaction and loyalty of customers at GSM service sector in Georgia. *International Journal of Engineering Technology and Scientific Innovation, 1*(2), 144-156.

Erguvan, M. M. (2015). Results of a survey on work efficiency at International Black Sea University, Georgia, to address the gap between the current status of the management system and total quality management (TQM) principles *5th International Research Conference on Education, English Language Teaching, English Language and Literatures in English* (pp. 136-147). Tbilisi, Georgia: International Black Sea University.

Buchashvili, G., & Erguvan, M. M. (2014). Students' expectations in the 21st century in Georgia - example of International Black Sea University *The Seventh International Scientific Conference on Education, Economy, and Sustainable Development* (pp. 29-35). Gori: Gori State Teaching University.

Doghonadze, N., Erguvan, M. M., & Gigauri, L. (2014). The impact of EACEA TEMPUS projects on the institutional development of International Black Sea University, Georgia *4th International Research Conference at the Faculty of Education on Education, English Language Teaching, English Language and Literatures in English* (pp. 211-214). Tbilisi: International Black Sea University.

Erguvan, M. M. (2014). Crucial factors for efficient leadership in higher educational institutions *9th Silk Road International Conference on Business, Economics, International Relations and Education* (pp. 138-143). Tbilisi: International Black Sea University.