



Evaluation of Technology Strategies as Quality Strategy of Higher Education Institutions

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ABSTRACT

Information technology is a major attempt to catch quality in education. It is an important development in the revolution of education through digitalization. In this respect, transformation becomes an essential consideration to foster quality strategy of higher education institutions in becoming long term success. This research study aims to examine the current situation of the quality improvement in the higher education institutions of North Cyprus as a developing country. It sheds a light to underline recommendations on how to improve quality and institutional effectiveness. An interview techniques that relies on qualitative base was conducted in the research. The research findings show that there should be collaboration with well-known universities to increase quality, prestige, and attraction. As a requirement of being an organizational institution, quality and ethical principles should be more effective in order to find a place among world universities. Student satisfaction and conducting research are key future directions to determine quality strategy in higher education institutions.

Keywords: higher education, management, technology, quality

INTRODUCTION

Quality in Higher Education has been one of the most significant issues around the world due to rapid increase in the number of universities and students. Higher education has a significant role for the creation of ideal citizens for the society and represents a key for a better life for these citizens (Becket and Brookes, 2008). Due to the rise of the knowledge-based society (Pavel, 2012) universities need to achieve quality, improve continuous monitoring, management, evaluation and enhancement in order to survive in a competitive environment (Mabic, 2012). Higher education has a great significance for the economic development of every nation since quality and performance are strongly related. Once the quality is improved, this reduces long term costs. Improved quality leads to customer satisfaction, increased number of students, increased confidence in the institution, improved research and dissemination of knowledge and reduced cost of promoting and attracting students (Avram & Avram, 2011).

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State of the literature

- Digitalization is essential to foster quality strategy of higher education institutions
- Internationalization process involves policies and initiatives practiced by institutions and individuals that improves quality in higher education.
- Improved quality leads to customer satisfaction, increased number of students, increased confidence in the institution, improved research and dissemination of knowledge and reduced cost of promoting.
- **Contribution of this paper to the literature**
- Student satisfaction and conducting research are key future directions to determine quality strategy in higher education institutions.
- %87 of the participants expressed the need for experienced staff to coordinate and work with in R-D studies in state organizations.
- Accreditation of the universities by overseas well-known accrediting organizations and the supervision of them are important factors affecting the quality.

The expansion of quality in higher education requires improved efficiency in administrative services and new organizational structures as well as effective leadership (Anyamele, 2005). In order to adapt to the rapid changes in the environment, organizations can benefit from the quality management (TQM) system. This system brings more “learning, dynamic structures, flexibility and quality (Aminbeidokhti, et.al.,2016, p.1154). Effectiveness of institutions rely on achieving goals and improving programs and services using the results of evaluations (Middle States Commission on Higher Education, 2005). Quality assurance processes are applied within the frame of quality management programme. Both external and internal stakeholders are concerned with the quality of the service (Becket and Brooks, 2008). While external stakeholders deal with the assessment of organizational quality assurance processes, internal stakeholders are engaged in both quality assurance and quality enhancements that emphasize the quality of teaching and learning using the contemporary practices as a tool (Mckay & Kember, 1999, cited in Becket & Brooks, 2008).

Higher education organizations should consider the following issues to achieve institutional and educational effectiveness: “1. Institution: regional accreditation, performance reporting, and governance control. 2. Academic and administrative department, program, and services: review, evaluation, and accreditation, 3. Faculty: assessment of teaching, scholarship, research, and service, 4. Classroom, course, and student: assessment of student performance, certification, and learning outcomes” (Volkwein, 2011, p 13).

Fred Volkwein (2011) discusses the quality assurance efforts in the USA higher education institutions. He states that high level administrators in universities are responsible for monitoring and improving institutional performance taking into consideration some indicators such as levels of admissions, enrolments, faculty and student profiles, tuition,

employee compensations, fellowships, etc. (Volkwein, 2011). This first line of quality assurance is later accredited by the national and regional accrediting bodies. Department and Program effectiveness is dealt in two levels: internal program review and external program accreditation. Some specialized accrediting bodies set program standards, which are followed by higher education institutions to contribute to institutional effectiveness. Each campus has its own internal program review processes which are also monitored by regional, state and discipline-based bodies. The assessment of student learning takes place in the classroom through standardized examinations which test their basic skills, general education skills and academic proficiency and progress (Volkwein, 2011).

Effective leadership is also required in administrative services to create procedures to avoid the risk of failure in order to support institutional excellence” (Anyamele, 2005). Knowing the challenges of globalization, and internationalization, leaders of Higher education institutions should find effective leadership approaches to lead their organizations (Black, 2015). Braun et. Al (2009, pp.202-203) proposes two training programs (one in individual level and the other in departmental level) to promote effective leadership in higher education institutions. The researchers after implementing these programs came up with the following four recommendations for leadership educations in higher education: 1. Leadership educations should focus on specific topics such as long-term career-planning, goal setting, etc. 2. Both individual and group approaches should be used to facilitate daily leadership practices. 3. More research should be conducted on evaluation procedures in leadership development. 4. Leadership educators need to cooperate to share their practical experiences and knowledge.

How to achieve quality in higher education can be seen in various research studies (Anyamele, 2005; Pedro & Franco, 2016; Hogg and Hogg, 1995; Murmura, Casolani & Bravi, 2016; Cardoso, Rosa, & Stensaker, 2016, Giannakis & Bullivant, 2016). Quality in higher education systems gives way to internationalization. Internationalization process involves policies and initiatives practiced by institutions and individuals in order to compete with the influences of globalization. The borderless world created by globalization gives importance to the diversity of cultures within countries, communities and institutions, and allows better understanding of individuals or groups within various communities.

Over the past 25 years, the internationalization has emerged as an important issue of higher education. Since economic globalization transformed knowledge into commodity, higher education institutions attempted to internationalize the recruitment of faculty and students in order to attain reputation for knowledge production (Mitchell and Nielsen, 2012). In a wider perspective, internationalization involves academic mobility, international perspectives in learning and teaching processes, recruitment of international academic staff and students, and having international partnerships with other higher educational institutions. There are considerable number of studies showing the significance of internationalization in higher education context (Rumbley, Altbach & Reisberg, 2012; Zolfaghari, Sabran, Zolfaghari, 2009; Teichler, 2004; Qiang, 2003; Alemu, 2014).

Bologna Process created a system of comparable degrees, supported student mobility and promoted European dimension in higher education. However, the higher institutions of some countries, which are not part of the Bologna process, may have difficulties in establishing quality and implementing the processes of internationalization due to political, economic, historical and organizational barriers. For example, the developing countries are noted having higher population, low per-capita income level, low physical and human resources, low levels of industrialization, low level of urbanization, dependence on foreign economic, social, and political forces, underdeveloped labour, financial and other markets (Faye et.al, 2004).

North Cyprus as a developing country has been struggling to bring the quality standards of the higher education institutions to those of the European level. North Cyprus is not a member of European Union and not politically recognized by any country except Turkey. Yet, for a possible political agreement with South Cyprus and in case of being a part of Bologna process, the higher education institutions in North Cyprus are engaged in a series of quality assurance activities such as establishing policies and procedures for higher education, setting professional development programs, improving learning, teaching and evaluation standards, etc.

Workshops were organized with the collaboration of the Ministry of Education and YODAK (Higher education Planning, Evaluation, Accreditation and Coordination Council) in Nicosia to discuss the future of the higher education in North Cyprus. Academics from different universities, high level administrators from the Ministry of Education and YODAK, technical staff from the line Ministries participated in these workshops. The workshops were organized under seven themes as follows: quality in higher education, research and development, academic promotions and ethical issues, publicity and social awareness, internationalization strategies, vocational standards, digital education for disabled people.

The researchers of the current study chaired the first workshop “quality in higher education.” With the official permission obtained from the Ministry of Education, the researchers used the data obtained from the discussions of the representatives participated in the workshop.

The basic aim of this paper is to discuss the current situation of the quality improvement in the higher education institutions of North Cyprus as a developing country and offer some recommendations on how to improve quality and institutional effectiveness in these institutions.

METHODOLOGY

Research Design

An interview techniques, one of the quantitative methods, was conducted in this study. The interviews can be classified as structured, semi-structured, and non-structured meetings. In a semi-structured interview, the questions are specified in advance and through

which data is collected (Karasar, 1998). This approach is not as tough as structured meetings or neither as flexible as non-structured meetings. It is in between these two ends. This is why the researcher preferred the semi-structured interview technique.

The Participants

An objective sampling, snowball sampling, was conducted to form the participating group (Tavşancıl & Aslan, 2001). The group was composed of instructors from universities with the belief that the most data could be collected from them (Tavşancıl & Aslan, 2001). 180 participants from the universities in North Cyprus involved in this study.

Table 1: *The Participants*

The Participants	Instructor
1	45
2	35
3	35
4	30
5	25
6	10
Total	180

Data Collection Procedure

The data was collected between 20 February - 10 April at the participants' convenience through face-to-face interviews, which lasted 45 minutes each.

Data Collection Tools

The interview forms consisted of questions to fully understand the participants' views about the quality strategies applied in higher education in North Cyprus. Three experts examined the interview forms for inter-validity and some questions were omitted due to the similarities and some were expanded and finalised for better understanding. For the confirmation of the clarity and comprehensiveness of the questions, a pilot study was carried out with an instructor. Meanwhile, the recordings were put into written form. In the next step, two other experts examined the document for clarity and comprehensiveness as well as the content to reflect the anticipated information. The two experts had a %91 agreement which confirmed the validity of the questions. The data was analysed in four phases through content-analysis.

Coding the Data: The recordings of the interviews were analysed and each line was numbered. The CDs and documents were controlled by an expert for errors or missing parts. Once the documents were ready, the data was put in sound inter sections and a code-list, which functioned as a key factor, was written. The coding-keys and the documents

were read separately and the points agreed or disagreed on were rearranged. The reliability, based on Miles's and Hubermann's formula, (1994), was calculated as %89. A reliability calculated over %70 is assumed valid (Miles & Hubermann). Therefore, the results reached in this study were valid for the research. The matching codes were taken as the basis in reaching the themes. In the analysis and modelling of the data, "QRS Nvivo 8" was referred to.

Theme Formation: At this point, the codes were put under certain categories and themes were formed. A total of four dimensions related to the research topic were formed.

Arrangement of the Data According to the Themes: At this stage, the views by the participants were explained in the way for the reader to understand and presented to the readers. The interview notes were put into "....." so as to specify the respondents. (see example below)

Example- 1: "....." (I (1))

I: Instructor

Interpretation of the Findings: The findings defined in detail and presented by the researchers have gone through the requirements of the qualitative stages and the results were supported by literature.

FINDINGS

Below are the perceptions to do with the evaluation of the application of quality strategies in higher education in North Cyprus. It is assumed that, the numerical analysis of the qualitative data will increase the reliability of the research, minimize errors, and facilitate comparison between the themes and categories. Therefore, the qualitative data was presented in percentages in tables and with the participants' views in every dimension.

Dimension 1. The state of quality, competitive strength, organizational and administrative power, and leadership of the structure

In this regard, the topic question in Dimension 1 was asked to 180 participants. Their views are given under rates and themes in Table 2.

%80 of the participant instructors expressed views saying that the State policy is focusing more on quantitative development and this is a negative effect in terms of quality. The instructors mostly expressed views saying that the State should emphasize quantitative development as well as the raise of qualities of the universities. (I(23) explained, "I think, the State should have a university policy. If not, then, serious strategical, tactical, and political steps are essential to improve development and raise the qualities of universities". %73 of the participants expressed worries about the lack of quality standards at universities. "Setting quality standards at universities is an urgent issue. Otherwise, universities lacking such standards are bound

to face serious problems in the future" (I.56). 80% complained about the lack of infrastructure, a requirement for quality. "In order to raise the qualities at universities, the shortages should urgently be completed, which do not cost much, I think" (I.67).

Table 2: The state of the development of quality, oranzizational and administrative power and leadership

Themes	Respondent	%	Instructors	
			Non-responent	%
Destructive and unfair competition among universities	121	67	59	33
Lack of quality standars at universities	132	73	48	27
Lack of central organizations with sanctios like YODAK (*)	138	76	42	24
Lack of state policy in qualitative development and its negative effects	144	80	36	20
Excess teaching load 85.000 students, 1500 instructors	101	56	79	44
Dependence on the income from students only and as a result its effect on student profile	122	67	58	33
Universities have not been established according to universal standards, private universities are run by parons rather than Academic Boards and oganizations	70	38	110	62
Political interference in state- supported universities	154	85	26	15
Lack of infrastructure at universities	144	80	36	20

Dimension II: Future Strategies

180 participants were asked for their views about future strategies. Their views are specified under rates and themes in Table 3.

86% of the participants stated the importance of the strategies to be followed to raise standards. They emphasized that the universities should be acredited by recognized overseas independent organizations and this procedure should be supervised by YODAK (Boad of Supervision and Accreditation of Higher Education), which constituted the most common view by the instructors. They pointed out that there was a need for close collaboration and studies among uiversities to raise the quality. (I.(21) expressed views about the subject matter saying, "I believe that the quality can be pulled up to higher levels by close collaboration and effort with well-known, independent acreditation boards and by active supervision and pursue of this procedure by YODAK". In order to raise the quality, prestige, and attraction of the higher education system, %68 of the participants agreed on this view. (I.(52) added

saying, "I 'm sure that, collaboration with the most famous top-level universities in the world will naturally raise the quality rapidly in our universities". In every theme, %57 of the participants advocated the view that quality and ethical principles are basic requirements in establishing universities. (I(47) stated views saying, "In my opinion, for better establishments, it is necessary that effective and fruitful quality and ethical principles are put in use and all decisions made are shared".

Table 3: Future Strategies

THEMES	Respondent	%	Non-respondent	%
Developing common standards by collaboration among universities	148	82	32	18
Specifying agreed principles in standards in accepting students	40	27	131	73
Applying quality and ethical principles effectively	104	57	76	43
Central entrance exam for for TRNC citizens	51	28	129	72
Universities should be accredited with overseas well-known, independent universities to raise standards and this process should be supervised by YODAK	156	86	24	14
Accreditation and ranking should be prioritized for sustainability and improvement through quality criterion	138	76	42	24
Collaborating with overseas well-known universities to provide quality, prestige, and attraction	123	68	57	32
Betterment of higher education programs in accordance with the business world	42	23	138	76

Dimension III: Specifying student satisfaction and future strategies

As in the previous dimensions, 180 participants were asked to raise views about student satisfaction and future strategies. The participants' views are as in Table 4, under themes and specified rates.

Table 4: *Student satisfaction and future strategies*

THEMES	INSTRUCTOR			
	Respondent	%	Non-respondent	%
High costs of living for students and families	134	74	46	26
Limited number of dormitories and high house-rent	169	93	11	7
Culture differences	59	32	121	68
Inland transportation problems	167	92	13	8
Attitudes of retailers and public associations towards students	137	73	43	27
Limited social and cultural activities	151	83	29	17
Limited services by local state organizations and municipalities	171	95	9	5
Lack of interest in English programs by some students	56	31	124	69
High air travelling costs	173	96	7	4
Analysis based on the countries as the major source of incoming students (e.g. Iran/Nigeria)	89	49	91	51
Questionnaires to test student satisfaction (the results should be examined by central organisations, like YODAK)	152	84	28	16
Widespread and better guidance and counselling should be provided for students	82	45	98	55
Student admission to casinos and betting offices should be restricted, controlled and sanctions be imposed	144	80	36	20
A student affair and communication center should be opened to serve all around the island	139	77	41	23
The state should contribute to student accommodation and transportation needs	168	93	12	7
Non-governmental organization serving to strengthen international student potential should be supported	117	65	63	35

%96 of the participant instructors raised worries about the high cost of travelling to the island by air. Compared to the other themes, the instructors focused more on this theme. In this respect, it can be suggested that cheaper travelling costs will raise the quality and student satisfaction. One of the instructors, (I. (21) said, "Students coming to our universities,

particularly the ones from the Middle East and Africa, cannot afford going back home on holidays and this affects student satisfaction negatively". "In my opinion, one of the biggest and the most crucial problems is the limited number of dormitories and the high costs of house-rent, which minimizes student satisfaction" explained (I (52). %83 of the participants pointed out that social and cultural activities are limited and mostly take place on university campuses. (I (47) added saying, "There should be more social and cultural activities involving many more students and universities should not be the only responsible units, but all State institutions and associations and non-governmental organizations should be involved in this process".

Dimension IV: Investigating research education and future strategies

180 participants were asked to raise views about research education given to students and future strategies. Table 5 presents their views in rates and themes.

Table 5: Research Education and Future Strategies

THEMES	Respondent		INSTRUCTOR Non-repondent	
		%		%
Different seminars and education dealing with research techniques and subjects	112	62	68	38
Encouraging Post-graduate studies	119	66	68	38
Starting project-based programs in primary education	67	37	113	63
Post-graduate programs should be based on R-D	109	60	71	40
Collaboration in research ad R-D among universities	125	69	65	31
Contributing to research education by inviting experts to the island	151	33	29	17
Developing programs to help develop the inexperienced by senior instructors	135	75	45	25
Directing resources allocated by the state to projects	141	78	39	22
Experts to coordinate and collaborate in R-D studies in state organizations	158	87	22	13

%87 of the participants expressed the need for experts to coordinate R- D (Research and Development) studies in State organizations and collaborative work. The majority of the inspectors agreed on this view. In this respect, in order to increase th quality and future strategies, the State should be in close collaboration with the universities and employ qualified staff to support R-D studies. (I (11) expressed views saying, "We do not have proper R-D units at uiversities and in State organizations. There is an urgent need for such units in collaboration with univversities and the State to reach more realistic strategies". %78 of the participants emphasized that the sources allocated by the State should be directed to such

projects. Related to this theme, an instructor (I (32) said, *“If the State allocates more payment for the projects carried out at universities, future strategies and education can reach higher levels”*. %83 of the participants stressed that encouraging experts in this field to come to the country will contribute to research studies. (I (43) supported this idea and added saying, *“Every university can invite well-known scientists to the country to benefit from them in research education and the future scenarios likely to happen”*.

CONCLUSION AND RECOMMENDATIONS

The findings reached in this research are as follows;

Dimension I: The state of quality, competitive power, strengthening of public and administrative structure

%80 of the participants expressed worries saying that the State prioritized quantitative development, but ignored qualitative development. Whereas, it can be suggested that quantitative development could be stopped at a certain level and the quality of universities is increased. An urgent and sound State policy can be developed to respond to this issue and universities should urgently establish quality standards. Moreover, sound steps should be taken for the betterment of insufficient infrastructure at universities. Instead of destructive and unnecessary rivalry, there should be more collaboration among universities. More instructors should be employed to enable effective teaching instead of working with crowded groups.

Dimension II: Future Strategies

Related to future strategies, %86 of the participant instructors emphasized the need and urgency of accreditation of the universities by overseas well-known accrediting organizations and the supervision of this process. The instructors suggested that there should be collaboration with well-known universities to increase quality, prestige, and attraction. As a requirement of being an organizational institution, quality and ethical principles should be more effective in order to find a place among world universities. In addition, higher education programs should be overviewed and sound steps should be taken for the betterment in the light of the standards of the business world.

Dimension III: Student satisfaction and future strategies

%96 of the participants, out of 180, expressed worries about student satisfaction originating from costly travelling by air. They suggested that the costs should be reduced for students. Even more, limited accommodation facilities (dormitories) and expensive house rents minimize student satisfaction. Therefore, universities or the State should build more dormitories and house rents should be controlled and be reasonable for the students. Students need social and cultural activities. The limited facilities, mostly on campuses, in this respect, decrease student satisfaction. The universities should not be the only centers responsible for organizing social and cultural activities, but the governmental and non-

governmental organizations too should be involved. Furthermore, the retailers and local organizations should understand students and exhibit better behaviors.

Dimension IV: Research education and future strategies

%87 of the participants expressed the need for experienced staff to coordinate and work with in R-D studies in state organizations. The State should be in close collaboration with the universities to develop future strategies by employing experts in this field. More financial support should be provided by the State to meet the expenses for projects, which will develop education services to higher levels. In addition, inviting experts in this field will contribute to research education. Universities, on the other hand, should follow innovations and invite scientists to benefit from them in educational researches and future scenarios.

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