

## A study of Distinguishing Operative TQM Factor Monitoring of Program, Process and Performances in the Public Sector Universities of Pakistan

**Tanzeela, Ph.D scholar**

National University of Modern Language (NUML), Islamabad, Pakistan

### Abstract

*The aim of this research is to investigate distinguishing operative TQM Factor Monitoring of Program, Process and Performances in the Public Sector Universities of the Pakistan. The population of the research study consists of all of the Public sector universities of the Pakistan. Simple Random Sampling (SRS) technique was used for sample selection. The sample of the research study is comprised of 30 public sector universities, 30 VC's, 30 Registrars, 30 Deans, 250 Teaching faculty and the 1000 students were randomly selected from the Social Sciences departments. Total 1174 respondents (Vice Chancellor, Deans, Registrars, Teachers and the students) provided complete response on all variables of the study. Overall response rate remained 87.61%. Research Instrument was developed by the researcher and was distributed among Vice Chancellors, Deans, Registrars, Teachers and the students in the sample universities of Pakistan. Data was analyzed in SPSS software and presented in the form of table. To achieve the objectives of the study null hypothesis were tested. Findings of this research study revealed that the effect of universities on TQM operative factor Monitoring of Program, Process and Performances is significant.*

**Key words:** *Quality, Monitoring, Process,*

### Introduction

Quality in education is a complex and a multidimensional concept, its main ingredient is transformation of the learner therefore monitoring in education is considering as central point that helps to enhance and improve student learning through quality improvement of academic processes and administrative personnel's (UNESCO, 2009). At present, higher education organizations are striving to maintain excellence in their entire educational processes, programs and the performances as strength of an organization depends on academic achievements and professional competencies of their learners, for this purpose, monitoring helps to evaluate programs/processes and performances, for the assurance of quality management and the quality of education as quality of education is a major factor to attain highest possible standards in educational programs and the performances (Bayraktar, 2008). The quality objective of monitoring is to increase current and foresee future management outcomes and their impacts on organizational efficiencies and their effectiveness. Main objective of monitoring is to what gets

examined is what gets improved Khan (2012) as monitoring and evaluation helps to indicate areas needed to be improved for the maintenance and enhancement of the quality.

### **Objectives of the Study**

1. To explore differences in opinions about distinctive TQM operative factor Monitoring of Program, Process and Performances between male and female at the public sector universities of Pakistan.
2. To explore the differences in opinions between sample groups with respect to TQM operative factor Monitoring of Program, Process and Performances at the public sector universities of Pakistan.
3. To explore the differences among universities with respect to TQM operative factor Monitoring of Program, Process and Performances at the public sector universities of Pakistan.

### **Hypothesis of the study**

1. There is no significant difference in the opinion of male and female about distinctive TQM operative factor Monitoring of Program, Process and Performances at University level.
2. There is no significant difference among different sample groups (VCs, Deans, Registrars, Teaching Faculty and students) on TQM operative factor Monitoring of Program, Process and Performances at University level.
3. There is no significant difference among universities on TQM operative factor Monitoring of Program, Process and Performances.

### **LITERATURE REVIEW**

Monitoring is a process (academic and administrative processes) to assess the quality of work performances and quality of organizational affairs and educational programs for the improvement of quality of organization, education and learning of the students (Kaynak, 2003). It is basic tool of management that examines impacts occurs after the end of any activity. Monitoring is continuing process and a key source of obtaining regular feedback and information in order to make judgements about the achievement of organizational goals/objectives (Kanayak, 2003). World-Bank published a paper on monitoring and evaluation in 2007 in which monitoring defined as an ongoing process that primarily aims to provide continuous intervention about lack thereof or barriers in the achievement of vision mission and desired goals as monitoring ensures accountability and aids decision making on time for the development of organizational effectiveness and sustainability (Zhang, 2000). It may be conducted through internal and external evaluators to track organizational progress and to facilitate decision making to yield quality outcomes. It provides comprehensive information on the organizational progress or deficiencies in order to take preventive measures to correct them as early as possible (ISO, 9000). In the

context of education its scope is not static but changeable with changing needs or time therefore educational programs and processes should be scrutinizing against the set targets of an organization as well as for quality assurance and its sustainability. One of the key purpose of monitoring in education is to ensure quality of education is being delivered equitably to all of the community at all levels (Khan, 2012).

### **Monitoring of Programs**

It refers towards educational programs which are directly responsible for the education of the learners as well as educators are liable for selection of norms, approaches and methods to teach their students hence, educational programs must be monitored and evaluated periodically (Kayani, Kayani and Naureen, 2011). The intended purpose of program and learning process assessment is to provide facts and figures to decision makers who are directly involved in making of curriculum or responsible for existing or proposed educational programs (Kaynak, 2003). Monitoring is a scientific method which is used not only to improve program quality but to satisfy the needs of multiple customers/stakeholders through adequate knowledge and skills being offered by the organization (Stufflebeam, 2003). It helps decision makers to develop a program through need assessment, need assessment is the initial step to develop program of study. It's a systematic process of examining the situation before the initiation of the program. Taba, (1962) defined situational analysis as diagnosis of needs or the factors that exists in the society where the planned program of study is going to be adopted or implemented. Monitoring of program not only helps to make decisions but it supports to develop a quality program or continuation of an existing program. Accrediting agencies such as European Association for Quality Assurance in Higher Education (ENQA), Agency for Quality Assurance by Accreditation of Study Programs (AQAS), Agency for Quality Assurance and Accreditation of Canonical Study Programs (AKAST), Qualifications and Curriculum Authority (QCA), Malaysian Qualification Framework (MQA) and Council for Higher Education Accreditation (CHEA), Australian Quality Award (AQC) and French Quality Award (FQA) many other accrediting agencies all over the world working on accreditation of programs and teaching and learning processes, most of them provide guidelines and suggest higher education institutions to focus on design and delivery of their educational programs for intended learning outcomes. Therefore, study programs must be designed by involving all higher education stakeholders especially students. After inauguration of academic program, monitoring tasks and activities must be designed in order to recognize how much students are satisfied with their learning, how well all-academic programs meeting their purposes and where improvement is needed and required (QAA, 1999).

### **Monitoring of Processes**

It includes both academic and administrative processes. It evaluates institutional vision and mission and subsequent goals to determine whether expected learning outcomes achieved or

not, and to identify defects that influences application of TQM in the organization. It is directed towards assessment of strategies, plans, quality management, of an organization, teaching and learning processes, infrastructure, research and human resources for the assurance of strategic plans, are working productively to the expected outcomes/results (Faganel and Dolinsek, 2012). Key purpose of monitoring processes is to collect information through variety of sources and techniques to ensure intended objectives can be achieved on time and total quality can be assure through qualitative and quantitative indicators internally and externally. Every educational organization has a statutory responsibility to assess and evaluate the quality of services being supplied to their stakeholders/customers and analyze blockades that effect improvement processes in seeking assurance of the quality (Plomp, Huijsman and Kluyfhout, 1992). At present, people claims greater assurance on quality in the delivery of educational services and management of higher education therefore, quality management/assurance becomes cornerstone of what an organization is planned to deliver for advancement of the knowledge and improvement of the educational processes (Rahman, Rahim and Mahyuddin, 2006). Hence, higher education organizations must develop inner and peripheral mechanisms to ensure effective teaching support, assessment and learning experiences through hetero-evaluation (McKimm, 2008). To maintain quality of higher education and improvement of educational processes, internal or self-assessment must be conducted, organization has to identify weak areas and analyzed gaps must be eliminated as improvement is an inside process, it must be implemented in the higher education organizations for the satisfaction of all stakeholders of higher education together with external assessments in order to achieve required standards of accreditation (In'airat and Al-Kassem, 2014).

### **Monitoring of Performances**

To cope globally, services organizations needs to perform efficiently as performance management leads to productivity and bring quality enhancement in the processes. Monitoring of performances is a critical ingredient that aligns performances with quality strategies and help organizations to achieve goals by keeping quality measurements in an adequate range. Monitoring of performances is very important in the Total Quality Management philosophy (Motwani, 2001). It's a process that works constantly, it helps to plan for the coming years, drilling and training, provide regular criticism, assists to take positive and corrective measures to appraise the performances (Evans and Lindsay, 2005). The key purposes of performance monitoring are not only to prove performances but to control and improve performances all the way between goal setting and evaluation to support the organizational mission and quality strategies for the achievement of organizational goals. It gives us valued inputs for adjustment of targets and organizational developments but if organization don't have proper monitoring system it will eventually fail to achieve vision and goals Motwani (2001), (Kaynak, 2003). It's a continuous process and throughout this process evaluators supposed to constantly monitor performances of the academic and administrative workforces to keep them on the right track as well as for the enhancement of system of management through a fair reward and recognition

mechanism (Mishra, 2005). Hence, quality performance measures should be established and implemented to assess performances of academic workforces and units in order to keep workforces motivated and encouraged. Monitoring of performances can be done with both summative or formative assessments that assessments can be used to take decisions to improve the delivery of education and process management (Tulgan, 2000). It is therefore necessary to understand causal relationships between actions and results and importantly to determine purposes of an educational organization is being enhanced and achieved as performance monitoring is an indicator that helps to achieve quality objectives to optimize the development of educational sector management and human capital (Aggarwal, 2004). It also assists to manage poor performance, to identify key issues and problems to deal with them, and fruitful to rating employees by appraising great performances of them. In the phase of planning of performance management, both the evaluators and employees should set a criteria and agree on goals and prospects for the year ahead including performance measures and how the evaluator will monitor or assess performances, from the very beginning workforces knows about what the organization and organizational evaluators is looking for and what is being used to measure their performance. Many organizations around the globe define Key Performance Indicators (KPI's) about what is really matters for the organization and workforces knows what are the priorities and what is to be measured. Key performance indicators helps to detect what is beneficial for the organization (Eckerson, 2010).

### **Types of Monitoring**

There are three types of monitoring described by (William, 2003). First is compliance monitoring which mainly focused on educational inputs (teachers, and their qualification, teaching tools or instructional material, pupil's ratio and total supporting staff) and ensures predetermined standards and benchmarks, set by the regulatory authorities, are being met or achieved. The hypothesis of compliance monitoring is to inspect whether organization is meeting standards on input measures or there is a need to plan for correction to meet acceptable levels of performances. Second is diagnostic monitoring, it emphasizes on outcomes. It gives insightful information and focuses on teaching and learning processes about what happens in the classroom and whether the students are learning what they are thought to learn. It helps to identify areas where remedial actions are required. Finally, is performance monitoring which includes both inputs and outputs. It is designed to evaluate progress of students and effectiveness of instruction. It facilitates to assess social and academic progresses of students periodically through several types of testing, to see effects of educational investments. There are five common methods of monitoring known as 1). Observation: this is probably the most common method or a technique of monitoring to observe people while they are working by team leaders to see how well they perform and where the action is required to correct it effectively. 2). Review records: analysis of records is a useful technique. In most of the organizations managers and team members keep manual and electronic records about what they perform or produced, this could be in computer databases or in kind of printed forms. 3). Criticism: It's an important

technique which is very helpful to get feedback from external and internal stakeholders about quality of goods and services especially when proprietor is not working alongside of the workforces. Feedback simply tells employees are performing, what they are doing and what needs improving. 4). Regular conferences/dialogues with workforces: Periodical catch-ups and frequent meetings with employees offer an opportunity to identify gaps in knowledge or skills. There is also a chance to know what's happening around, what's going on, how well they perform, how employees are working, what they are working or anything they are behind on. 5). Reporting: Regular reporting on organizational affairs and on agreed rules and regulations provides an ample way to detect issues to overcome them or to improve them where required (Eckerson, 2010).

### **Monitoring of Programs, Process and Performances in Higher Education**

Monitoring of programs, processes and performances is an assessment of how well the higher education organizations are working, how deep academic and administrative staff perform into workings of organizations and dedicated towards goals and services, what preventive measures they are taking for the assurance and improvement of the quality Dollery, Murray and Crase (2006), (Nygaard and Belluigib, 2011). It helps policy makers to take well-informed decisions. Monitoring of programs, processes and performances in education is an essential element that ultimately leads towards quality assurance of education and management (OECD, 2008). There are various methodological approaches used for quality assurance regarded from different perceptions, carried out on different levels by different groups at micro and macro level. They can be qualitative or quantitative or combination of both. There are main three purposes of assurances approaches 1). Accountability, 2). Improvement and 3). Transparency. They performed at main three levels (OECD, 2014): System Level, usually it takes place at national level by national authorities with the Government Participants. However, in various countries respective powers may be performed by regional authorities but it depends on jurisdictions of the country. Institutional level, this refers towards higher education organizations, carried out within institution or by respective bodies of higher education organizations like Higher Education Commission in Pakistan. Program level, refers towards study programs used at micro level to assure quality of study programs. There are some quality approaches given in the Literature (OECD, 2014) to measure the quality.

a). Performance Indicators: It's a high stake instrument which have four types including hard statistics, second-order statistics, indices based on hard ratios/statistics and Judgement calls. These tools used as policy tools in higher education for public accountability or monitoring. Performance indicators or key enablers are quantifiable transparency tools may be serve for diverse purposes. Most of the time they are used for accountability and improvement of institutional or program performance. They make information more clear, transparent by identifying weak areas for the sake of removal of weaknesses.

b). Accreditation: accreditation is evaluation of an organization or a program, whether it meets strategic standards, it comprehensively examines mission, resources and procedures of higher education organizations. It is widely used in the various parts of the world especially in the United States of America, Australia, Nordic, Austrian, Germany, Dutch, and half of European countries by the quality assurance agencies as a quality method to accredit both an organization and study programs periodically. All of the quality assurance agencies, expert groups, and government bodies set their criteria's, minimum requirements for assurance of the quality of each program and an organization. Second is assessment, assessment is judgment about quality and quality initiatives, it goes beyond accreditation and do binary evaluation. It evaluates how appealing are outputs (numerical, literal and descriptive). Assessment of organizations and programs are also used broadly by European quality assurance agencies, Malaysian qualification agencies and many other countries in the world. It takes place on regular basis by 53% English speaking and European agencies while organizational assessment is less prevalent, about 22% of the Australian, Norwegian and European agencies are used to it.

c). Audit, audit is used to check the extent to which an organization is accomplishing its strategic quality objectives. It also examines the aptness of planned quality processes in relation to the defined objectives simultaneously it confirms quality activities match with the plans in order to inspect effectiveness of the activities for the accomplishment of the organizational or program goals. Unlike accreditation and assessment audit do not claim comprehensive review of higher education organizations on the whole nor do evaluation of quality of teaching and learning. About 28 % of the assurance agencies regularly auditing in Europe, Ireland, UK and Nordic associated countries. So, in concluding thoughts monitoring assumed as a tool that is used to promote quality management, display better accountability, provide transparent information, brings innovation and reforms and finally improve the outcomes therefore internal and external quality assurance agencies should include interactive debriefing, provide necessary prospects about strengths and weaknesses, quality improvements of the organization and a study programs OECD, (2009), (Harvey, 2002).

d). Ranking: ranking of universities does matter and significant at system level. Ranking have secondary effects leading to improvements

e). Benchmarking: it's a most powerful tool used for improvement and transparency. The key purpose of this tool is to provide visible and transparent information for self-improvement.

f). Monitoring and assessment of learning outcomes: Focused part of these assessments are program of studies, content knowledge, qualification of teaching along with infrastructure and services provided in the higher education organizations. These assessments carried out at institutional level internally in order to collect information about the learning achievements. Most of time organizations used portfolios of students as qualitative tool for improvement. Satisfaction sever as key factor of this assessment process in order to know what learner is

expected and think about learning s. Hence, most of the developed organizations create tools and mechanisms for measurement of learning outcomes and struggling to find new ways to foster pedagogical methods.

i). Guidelines: guidelines are internal quality standards or regulations, includes quality guidelines, implemented at system or organizational level to serve accountability and improvement. At the system level it is in the form of non-binding recommendatory (benchmarking) while at the organizational level, it is in the form of binding document valid across the organization (accountability purpose).

j). Quality Frameworks: may serve at system level used for quality improvement. Various global and national universities striving to implement qualification framework.

k). Performance appraisal: appraisal of academic and administrative staff is a key instrument of quality assurance used at organizational level to impact leadership team career, and academia accountability for improvement of performances for instance quality of teaching. Quality of teaching is one of the core mission of higher education organizations along with quality research and engagements with society. Usually, teaching and learning process appraised through input indicators and teaching activities. Although some of the organizations developed quality approaches to measure quality of teaching however there is no widely accepted instrument to measure quality of teaching.

l). Quality assessments: based on self or external evaluations carried out in the form of grading of system or organizational level, used for several purposes. External evaluations usually done by the quality assurance agencies or quality boards for quality improvements, while self-evaluations transpire at institutional level, it is done by the internal commission of monitoring used for accountability and improvement both.

### **Follow Ups of Monitoring**

Monitoring focused on inputs (Financial, Human and material), processes (effectiveness of teaching-learning and management practices) and outcomes (learning and quality outputs). High quality education or a system needs monitoring for the provision of adequate knowledge, skills and social development of students. Monitoring consider as key factor or an indicator in the higher education organizations at both national and international level. Primarily, it is dedicated towards quality standards set by the department or an organization in order to achieve them by taking corrective actions in time. It gives directions to academic and administrative leadership who must take responsibility to bring improvement in teaching and learning processes and in performance achievements through internal and external monitoring system. There are five steps of monitoring designed by the Hoover, (2009) as follows: 1). For enhancement of the quality of a system or quality of education, it is required to identify skills to monitored systems and policies that aims to ensure quality of processes and study programs. 2). It is important to

create task matrix, quality assurance activities match with both national and international standards and assessment measures to strengthen teaching and learning processes, to improve them systematically. 3). After inauguration of monitoring tasks, decide a time schedule and plans accordingly. 4). Conduct monitoring and evaluation session conferring to the set standards and the timetable. 5). Present assessment results in the form of graphs or charts for more clear and insightful view of each area of assessment. 6). Assess and evaluate level of performances and rate of progression. 7). Alter or modify the whole processes and the performances where and whenever required. 8). Work for progress monitoring with the help of outcomes and quality standards regularly and frequently.

### Methodology

#### Population

All the faculty members and all the students were treated as the population of the research study.

#### Sample

There are 74 universities acknowledge by the Higher Education Commission of the Pakistan from 74 universities 30 public sector universities including 30 VC's, 30 Registrars, 30 Deans, 250 Teachers and the 1000 students were selected through simple random sampling technique as a sample of the study.

#### Instrument

Questionnaire was used to collect the data.

#### Results

Descriptive statistic of distinguishing TQM operative factor Monitoring of program, process and performances of the sample group

**Table 1:**

**Comparison of Mean and SD**

S. No	Sample group	Mean	S.D
1	Vice chancellor (VC's)	60.31	3.11
2	Dean	55.25	3.25
2	Registrar	56.95	3.29
4	Teaching faculty	56.55	2.47
5	Students	38.15	2.23

Table 1 describes the descriptive statistics of distinguishing TQM operative factor monitoring of program process and performances being operated in the public sector universities of Pakistan. Analysis reveals mean values of distinguishing TQM factors monitoring of program process and performances revealed by the VC's (Mean =60.31), Dean (Mean =55.25), registrar (Mean =56.95), teaching faculty (Mean =56.55) and students (Mean =38.15) respectively. There was high mean score of VC's and lower mean of students. Vice chancellor (VC's) observes and perceives that distinguishing TQM operative factor monitoring of program process and performances was being more efficiently and resourcefully functioning in their universities.

### Hypothesis of the study

H0 1: There is no significance difference in the opinion of male and female about distinctive TQM operative factor monitoring of program process and performances at University level.

**Table: 2**

**Mean score and t value on score of monitoring of program process and performances of male and female**

Respondents	N	Mean	S.D	t-value	Df	p-value
Male	639	36.03	4.499	1.299	1172	0.194
Female	535	35.69	4.290			

Significant t-value at 0.05

Table 2 shows mean difference on the scores of TQM operative factor monitoring of program process and performances of male and female. The mean of male was 36.03 and female was 35.69. The mean difference is 0.34. The mean score of male is better than female. The value of t (1.299) is not significant at  $p \leq 0.05$  level of significance. Therefore, our null hypothesis that there is no significance difference in the opinion of male and female about distinctive TQM operative factor monitoring of program process and performances at University level is accepted.

H0 2: There is no significant difference among different sample groups (VCs, Deans, Registrars, Teaching Faculty and students) on TQM operative factors monitoring of program process and performances at University level.

**Table: 3**

**Analysis of variance on monitoring of program process and performances of different sample groups (VCs, Deans, Registrars, Teaching Faculty and students)**

Sources of variation	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	271.179	4	67.795		
Within Groups	22503.656	1169	19.250	3.522	.007*
Total	22774.835	1173			

\*Significant level  $p \leq 0.05$

Table 3 shows that F-Value (3.522) regarding the effect of sample groups on TQM operative factors Monitoring of program process and performances scores is significant at  $p \leq 0.05$  level of significance, so our null hypothesis that there is no significant difference among different sample groups (VCs, Deans, Registrars, Teaching Faculty and students) on TQM operative factors Monitoring of program process and performances at University level is rejected.

H0 3: There is no significant difference among universities on TQM operative factors monitoring of Programs process and performances.

**Table: 4**

**Analysis of variance on monitoring of programs process and performances among universities**

Sources of variation	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2055.425	29	70.877		
Within Groups	20719.410	1144	18.111	3.913	.000*
Total	22774.835	1173			

\*Significant level  $p \leq 0.05$

Table 4 shows that F-Value (3.913) regarding the effect of universities on TQM operative factors monitoring of programs process and performances scores is significant at  $p \leq 0.05$  level of significance, so our null hypothesis that there is no significant difference among universities on TQM operative factors monitoring of Programs process and performances rejected.

### Conclusion and Discussion

Findings of this research study revealed that there is no significant difference about monitoring of programs process and performances of between male and female. The mean of male is greater than female. It was concluded that there is found similarities in the opinion of male and female regarding TQM operative factor monitoring of programs process and performances. Findings of this research study revealed that the effect of sample groups on TQM operative factor monitoring of programs process and performances is significant. There are differences found in the opinions of sample group about factor monitoring of programs process and performances. Findings of this research study also revealed that the effect of universities on TQM operative factor monitoring of programs process and performances is significant. The results of the present study revealed that the sample groups have not significant effects with respect to TQM factors. While in factor vision and mission and Monitoring of program process and performances have significant effect. At present, competition arises increasingly around the globe, hence public sector organizations need to work on quality of academic and administrative groups, as both groups work correspondingly towards achievement of organizational vision and mission, therefore adequate training and education should be provided to them and link hem with other organizations at the same level in order to eliminate errors and enhancement of programs, processes and performances through quality based monitoring.

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## Appendix

**A study of Distinguishing Operative TQM Factor Monitoring of Program, Process and Performances in the Public Sector Universities of Pakistan**

Gender:

Position:

Institution:

<b>MONITORING OF PROGRAMS, PROCESS &amp; PERFORMANCES</b>						
<b>S #</b>	<b>Items</b>	<b>Strongly disagree 1</b>	<b>Disagree 2</b>	<b>Uncertain 3</b>	<b>Agree 4</b>	<b>Strongly -agree 5</b>
1	Quality assurance system exists at the university to promote quality and support organization at all levels	1	2	3	4	5
2	There are sufficient physical and financial resources	1	2	3	4	5
3	The university has a track system to examine bylaws and strategic plans for proper implementation	1	2	3	4	5
4	The university generally surveys impacts on all stakeholders to determine required changes regarding its policies, programs and services	1	2	3	4	5
5	The university ensures curriculum validity and reliability before its application	1	2	3	4	5
6	Academic and administrative audit (review) takes place after completion of every organizational activity	1	2	3	4	5
7	Academic (Educational) activities are evaluated before their application	1	2	3	4	5

<b>8</b>	Academic programs are compared with other local and foreign institutions for innovative learning environment	1	2	3	4	5
<b>9</b>	Academic staff assists students for accomplishing success in their professional and academic lives	1	2	3	4	5
<b>10</b>	The students supposed to provide feedback once in three months of the course delivery for ongoing improvement	1	2	3	4	5
<b>11</b>	Faculty adequacy is measured through the feedback of the students	1	2	3	4	5
<b>12</b>	Administration frequently inspect capabilities of managerial and academic staff	1	2	3	4	5
<b>13</b>	Finance and physical resources are regularly scrutinized	1	2	3	4	5
<b>14</b>	The university helps evaluators to identify better programs, products and services for ongoing developments	1	2	3	4	5
<b>15</b>	Programs and processes assessments are considered as advices and opinions rather than criticism	1	2	3	4	5
<b>16</b>	Monitoring of programs, processes and performances is worthwhile to take quality decisions about needed changes	1	2	3	4	5