

Integration of strategic management and quality assurance

Juha Kettunen

Turku University of Applied Sciences
Joukahaisenkatu 3 A
FIN-20520 Turku, Finland
tel: +358 2 2633 5612
fax: +358 2 2633 5791
e-mail: Juha.Kettunen@turkuamk.fi

Abstract:

The purpose of this study is to investigate the integration of quality assurance and strategic management in higher education. The study presents the concept of the quality map, which is a graphical representation of the quality assurance system. The quality map explicitly takes into account the environment, strategic planning and the internal processes of the organisation. The quality map helps the management of the higher education institution to present an overview of the quality assurance system to the external evaluators, members of the organisation, students and other stakeholders. The framework developed in this study is used to analyse the engagement of HEIs in regional development.

Keywords: quality assurance, strategic management, quality map, higher education, regional development

Biography: Dr Juha Kettunen is the Rector of the Turku University of Applied Sciences, Finland and Adjunct Professor at the University of Jyväskylä, Finland. He was previously the Director of the Vantaa Institute for Continuing Education, University of Helsinki and Director of the Advanced Management Education Centre, University of Jyväskylä. He holds a PhD from the University of Bristol, UK, and a DSc from the University of Jyväskylä, Finland.

1. Introduction

The attention of education policy has in recent years focused on institutional performance including quality assurance, management and external impact on the region. The regional development of HEIs involves education, research, development and service to the community. The outreach and engagement of the institutions are evaluated by external evaluators and other stakeholders. Without a common framework, the evaluation of quality and institutional performance is easily based on the backgrounds and subjective experiences of the evaluators.

The European ministers responsible for higher education agreed in the Bologna Process on joint objectives for the development of a coherent and cohesive European Higher Education Area (Berlin Communiqué, 2003). The quality assurance systems of higher education institutions (HEIs) are at the heart of the setting up of the European area. The European countries have established their own quality assurance agencies and developed their own national solutions for evaluating and demonstrating the quality of degrees (Finnish Higher Education Evaluation Council, 2006).

The HEIs are accountable for the quality of their education and other activities to the quality assurance agencies, the ministries of education and other stakeholders. The institutions are obliged to regularly evaluate their activities and participate in external evaluations (Ministry of Education, Finland, 2005). The relationship between the quality assurance and the institutional management has attracted much attention. Without adherence to the quality management system, it is impossible for any organisation to know how well it is performing (Beckford, 2002). The institutional management and activities must be integrated into the quality assurance system.

The purpose of this study is to develop a quality map to describe the quality assurance system in higher education. The quality map provides a broad overview of the quality assurance system for management, the members of the organisation, external evaluators and other stakeholders. The quality map is like a road map, and describes only the main land marks to reach the destination. The quality map has been derived from the concept of the strategy map introduced by Kaplan and Norton (2004), but instead of the strategic plan the quality map describes the quality assurance system. The quality map provides a framework to analyse the global, national and local environments and how the institution responds to the needs of the environment.

The study applies the quality map approach to the Finnish universities of applied sciences. The autonomy of institutions enhances the responsibility of institutions to select the tools for management and quality assurance (Maassen and Stensaker, 2003). Therefore each institution has its own quality assurance system, which is tailored to meet its own needs. The quality map presented in this study is a general representation, which can be tailored for each institution to take into account the management process, information systems and internal processes of the organisation. Even though the quality map is applied in this study to HEIs it can also be used in other organisations.

The study is organised as follows: The next section introduces the concept of the quality map to describe the quality framework of the HEI. The role of environment scanning in quality assurance is discussed. The essential characteristic of quality assurance is that it is customer-oriented. The continuous improvement in relation to strategic management is presented. It is important to integrate these two management approaches into the action plan to achieve positive external impacts on the region. Then the framework is used to describe the external impact of the HEI on its region. Finally, the results of the study are discussed in the concluding section.

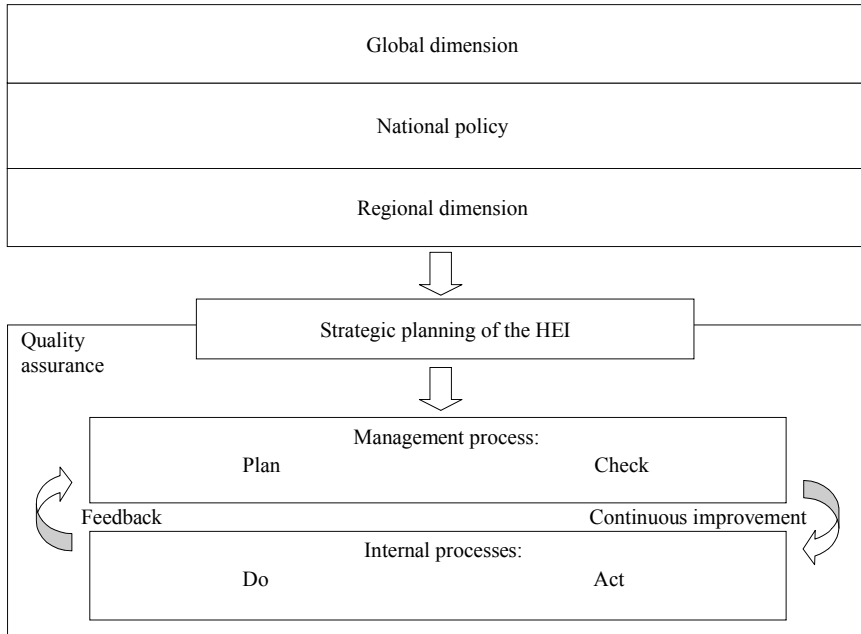
2. The quality map

The quality map is a graphical representation describing the main characteristics of the quality assurance system. The quality map helps the management of the organisation to communicate the quality assurance system to the employees, external evaluators and other stakeholders to show how high quality operations can be achieved. External evaluators and other stakeholders need to get the big picture of the quality assurance system of the institution. The structure properly described by the quality map is a safeguard that the system has all the necessary elements.

Figure 1 describes the quality map of a higher education institution. The essential elements include an environmental analysis. The environment must be taken into account in the strategic planning of the HEI. The management process receives outlines from strategic planning and sets the targets for the internal processes of the organisation. The challenge of management is to communicate and implement the strategic plans and enhance high quality in all the activities of the internal processes of the organisation.

Continuous improvement is an essential principle to achieve high quality. It can be described by the traditional quality cycle introduced by Deming (1986). The management process includes the “plan” and “check” phases of the quality cycle. The internal processes include the “do” and “act” phases. The management receives feedback from the activities and steers the organisation using the principle of continuous improvement. The internal processes implement the action plans and continuously improve the processes.

Figure 1. Quality map of a higher education institution



Environmental scanning in quality assurance

The global environment is characterised by rapid change, intense information flows and increasing competition. The high quality of education is the key factor in the invisible competition between the HEIs. The competition of American, Australian and Asian HEIs has forced the European countries

to plan their common education policy. The administration of HEIs is interested in activities having a potential impact on the quality and performance of the institution (Hammond et al., 2004).

The European education policy is outlined in the Bologna Process, where the European ministers responsible for higher education have agreed on joint objectives for the development of the European Higher Education Area by 2010. The European higher education policy emphasises quality assurance and aims to enhance the competitiveness of the Europe increasing the mobility of students, staff and labour force. Increased student mobility and international degree programmes are challenges for the future of HEIs.

The national education policy causes turbulence and complexities for HEIs, which are required to teach an increasing number of students even though the resources do not remarkably increase. The HEIs should also pay more attention to the quality of teaching and other activities (Umashankar and Dutta, 2007). Consequently the internal processes and structures are under pressure to adapt to the many changes in the environment. The challenges of the national education policy include the structural changes of the HEIs, the decreasing number of young students applying to higher education and the aim to increase the effectiveness of the public sector. On the other hand, the quality assurance has assumed an increasing and prominent role in many countries.

Regional development is an activity assumed by HEIs due to education policy. HEIs must engage with the other HEIs and organisations in the region, provide opportunities for lifelong learning and contribute to the development of knowledge-intensive jobs. The regional dimension is gaining in importance. The traditional science-oriented universities especially emphasise their third mission and shift activities from isolated scientific research to applied research to achieve external impact on the region (Laredo, 2007).

The ministries of education have required that HEIs plan regional strategies jointly with other HEIs and partners in the region. The regional strategic plans facilitate work sharing and cooperation between institutions in order to increase the external impact of the institutions (Kettunen, 2004a,b, 2006). In many countries, the education policy has shifted to the phase where the ministries recommend strategic alliances for HEIs in a region. Such a development easily leads to mergers of the HEIs. Increased international competition and cost-effectiveness are the publicly articulated reasons for the structural changes of the HEIs.

HEIs must ensure that they deliver high quality education to their students. It is important to use an environment-oriented approach in quality assurance to analyse the position of the HEI in its environment. Some studies have counted quality as one of the elements of strategic plans and emphasised the use of environmental analysis (Welch and Dey, 2002). Linking strategic planning with quality assurance is essential in order to ensure that the quality assurance systems are customer-oriented and linked to regional development.

Strategic planning of the HEI

In textbooks, the process of strategic planning typically has three main phases, namely strategic analysis, strategic choice and strategy implementation (Johnson and Scholes, 2002). In the first phase, an analysis is done in order to understand the position of the organisation in its environment. In the phase of strategic choice various options are evaluated and a specific strategy is selected. The final phase is concerned with the communication and implementation of the strategic plan. It includes the budgeting, human resources plan and action plan, which are necessary to allocate the financial and human resources and set the timetables.

The examination of the competitive environment of the organisation is of special importance when the organisation plans its future. Each organisation must know its strategic position in its environment before it makes any strategic choices (Tsiakkuros and Pashiardis, 2002). It is important to match the capabilities of the organisation with the environment in which it operates. The examination of the environment may also be called “environmental scanning”. HEIs do not necessarily differ from many other organisations, because they operate in competitive markets. They compete for students and funds from public and private sources.

Continuous improvement of activities

Figure 2 presents the quality cycle of continuous improvement in higher education. The quality cycle is an iterative four-step problem-solving process, also known as the Deming Cycle (Tague, 2004). The quality cycle includes the sequential phases of “plan”, “do”, “check” and “act” as described by the father of quality management W. Edwards Deming (1986). Iteration is the basic principle of the method. Repeating the cycle can bring the managers close to perfect operation and output.

The quality cycle in higher education includes the value chain of higher education. The process of research and development is the first main process. It provides input for the processes of support services and education. Institutional research is the category of research and development which directly serves the process of the support services. The support services continuously develop the education process in many ways. According to the legislation governing the Finnish universities of applied sciences, applied research and development are to serve education.

Figure 2. Quality cycle of continuous improvement in higher education

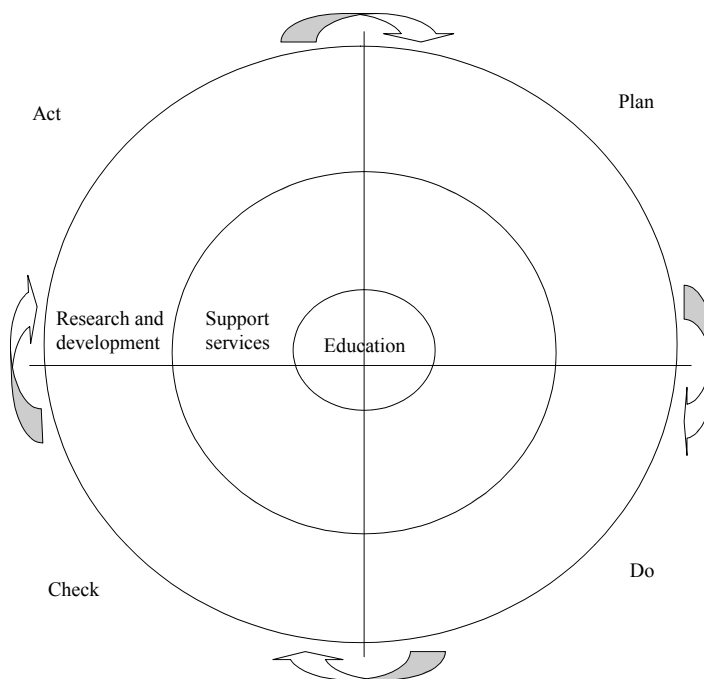


Table 1 describes the general concepts of continuous improvement in education, support services and research and development. The various activities have their own quality circles. The approach of quality cycle is about planning what is to be done. Feedback is collected about activities using observation, indicators and surveys. If the results are unsatisfactory and the objectives have not been achieved, systematic reflection on what approach and deployment led to these results may suggest useful improvement measures (Woodhouse, 2003).

The purpose of the “plan” phase is to establish the objectives and processes necessary to deliver results in accordance with the specifications. The needs of employers and students are analysed in this phase. The “plan” phase includes the strategic plans, action plans, human resources plans, budgets, process descriptions and operational rules. The specific plans of HEIs include curricula, the workload plans of teachers, the personal study plans of students and the plans of research programmes and projects.

The purpose of the “do” phase is to implement the plans. This phase includes among others teaching, general management, the production of support services, the recruitment of staff and students, research and development, supervision and project management. Teaching is aligned to ensure a clear continuity of instruction throughout the degree programme looking at what is taught at earlier and later grade levels and in other disciplines. Quality assurance is most efficient when it is transformed into action close to teaching and learning.

The purpose of the “check” phase is to monitor and evaluate the processes and report the outcomes. This phase includes feedback and the evaluation of activities. Feedback can be obtained from advisory boards, employers, students, the Ministry of Education, the quality assurance agency and the management of the HEI. The top management of the HEI typically arranges annual target discussions and strategy seminars with the faculties. It is important especially to evaluate the achievement of the strategic objectives and the target values of the measures agreed in the previous negotiations. An important evaluation is internal benchmarking, where an internal group evaluates a degree programme and makes proposals to improve its quality.

The purpose of the “act” phase is to apply actions to the outcome for the necessary improvement. This means reviewing all the steps of the quality circle and modifying the process before the next implementation. This phase includes the improvements based on the feedback and evaluations of activities. If assessments show that students are not learning as expected, mid-course corrective measures are taken such as extra instruction, tutoring, mentoring and different teaching methods. The results of this phase become input for the plan phase of the next quality cycle.

Table 1. Continuous improvement in education, support services and research and development

	Plan	Do	Check	Act
Education	<ul style="list-style-type: none"> • Pedagogical and other strategic plans • Action plans • Curriculum planning • Course implementation plans 	<ul style="list-style-type: none"> • Teaching 	<ul style="list-style-type: none"> • Evaluation of education in the advisory boards • Employer survey • Student survey • Graduate survey • Evaluation of 	<ul style="list-style-type: none"> • Improvements to the action plans • Review the development programme of education • Review of curricula

	<ul style="list-style-type: none"> • Workload plans of teachers • Personal study plans of students 		<ul style="list-style-type: none"> • Curricula and competences • Internal benchmarking between degree programmes 	<ul style="list-style-type: none"> • Review of course implementation plans • Review of personal development plans
Support services	<ul style="list-style-type: none"> • Overall strategic plan of the institution • Strategic plans of the support services • Process descriptions and operational rules • Budgeting, action plans and human resources plans 	<ul style="list-style-type: none"> • General management • Production of support services • Recruitment of staff and students 	<ul style="list-style-type: none"> • Target discussions with the Ministry of Education • Evaluations of the quality assurance agency • National database of HEIs • Strategy seminars • Evaluation of action plans in the internal target discussions 	<ul style="list-style-type: none"> • Target agreement with the Ministry of Education • Setting new targets in the internal target discussions • Review of action plans • Review of personal development plans
Research and development	<ul style="list-style-type: none"> • Strategic plan for research and development • Plans of research and development programmes • Project plans 	<ul style="list-style-type: none"> • Research and development • Supervision • Project management 	<ul style="list-style-type: none"> • Evaluation of action plans in the internal target discussions • Project database of the institution • Number of publications and patents 	<ul style="list-style-type: none"> • Review of the development programme for research and development • Review of action plans • Review of personal development plans

3. Regional development

Table 2 describes the external effects of the HEI on the region. The primary focus of the regionally engaged HEI is not to produce new universal knowledge, but to focus its activities on serving its region. The action plans of regional development are written using the outlines provided by strategic plans and quality assurance (Kettunen and Kantola, 2005, 2007). The Ministry of Education has an important role in evaluating the HEIs on the basis of the statistics, target negotiations and reports submitted by the HEIs. The corrective actions may include the development of practices with working life and more precise allocation of funding for research and development.

A regionally engaged HEI plans its curricula to meet the needs of the region. Education includes development projects, practical training in companies and public organisations. These typically address regional development needs. The Finnish universities of applied sciences have advisory boards where representatives of working life constantly advise on the development of the education offered. Feedback from students is collected during the courses. Regular feedback is also collected from graduates. Continuous improvement is the core of quality assurance in higher education. The evaluation of education may lead to new courses, modules, degree programmes or continuing education for adults.

A regionally engaged institution defines its strategic plan to cater for regional needs. The strategic outlines and coordination of regional development are not likely to be effective if sufficient funding is not allocated to regional development. Regionally engaged HEIs have established units supporting cooperation in the regional networks. If regional development is isolated in a unit which is not integrated into the main activities of the institution, it cannot be effective. In a successful case the unit for regional development supports the teachers, researchers and other people in the HEI in focusing their activities to meet the needs of the region in networked cooperation.

The autonomy and accountability of universities have received much attention, because these are related to external revenue and regional development (Moses, 2007, Salmi, 2007). The Ministry of Education annually evaluates the regional engagement of the HEIs. Some HEIs submit corporate responsibility reports, because they are accountable to the region and society for their networked cooperation and outcomes. There are many cooperative organisations such as science parks, technology parks and funding bodies which support the transfer of knowledge and know-how from an HEI to working life.

There are examples that the participation in local networks may be the first phase of cooperation which leads to close cooperation on the same premises. In Helsinki, the universities and research institutes have joined forces in economics to collaborate in the same building (Helsinki Centre for Economic Research, 2008). There are also similar examples in information and communication technology (Kettunen, 2007).

Regionally engaged institutions have planned their strategic plans of research and development and aligned their research programmes to support the implementation of the regional strategies planned by cities, regional councils and other important operators in the region (Kettunen, 2006). Regionally engaged HEIs have restructured their organisations to support team work and multidisciplinaryity to meet customer needs and create innovations. Research and development are evaluated in publications and other outcomes and the development of funding and networks in the region.

Table 2. External effects of the higher education institution on the region

	Plan	Do	Check	Act
Education	<ul style="list-style-type: none"> • Plan curricula to meet the needs of the region 	<ul style="list-style-type: none"> • Education includes development projects, practical training and theses which support regional development 	<ul style="list-style-type: none"> • Evaluation of education in the advisory boards • Employer satisfaction in the region • Employment of students in the region 	<ul style="list-style-type: none"> • Review the contents of the curricula • Introduce new courses, modules and degree programmes • Tailored programmes of continuing education
Support services	<ul style="list-style-type: none"> • Define strategic and action plans to meet the needs of the region • Allocate funds for a unit of regional development 	<ul style="list-style-type: none"> • Establish a unit to link the HEI with the region • Support collaboration between HEIs • Participation in regional networks • Arrange the physical proximity of education, research and business 	<ul style="list-style-type: none"> • Evaluation by the Ministry of Education • Corporate responsibility report 	<ul style="list-style-type: none"> • Development programme of regional development • Review the action plan for regional development
Research and development	<ul style="list-style-type: none"> • Plan the strategies of research and development to meet the needs of the region • Plan the focus of the research and development programmes 	<ul style="list-style-type: none"> • Implement the research and development programmes • Restructure the organisation to support innovative research and development 	<ul style="list-style-type: none"> • Evaluation of the outcomes of research and development • Share of regional funding • Funding by municipalities in the region 	<ul style="list-style-type: none"> • Development of the practices with working life • Review the project funding

4. Conclusions

This study presented the concept of the quality map which can be used to describe the general structure of the quality assurance system. The quality map provides a framework to audit the quality assurance system. Without a common framework, external evaluations and quality audits are based on the backgrounds and subjective experiences of the evaluators. The framework is necessary because it improves the quality of external evaluations and quality audits. The quality map was especially developed to meet the needs of the Finnish universities of applied sciences, but it can also be used in other organisations.

The approaches of strategic and quality management were developed independently of each other. Both of these approaches have been widely used in higher education institutions, which do not differ from many other organisations. These two approaches meet in the management information systems and especially action plans. The concrete steps of strategic management and continuous management must also be integrated into the human resource plans and budgets of the organisation.

Quality is most efficient when it is situated at the grass-root level and if the workers are committed to high quality. A major challenge of quality assurance at the HEI is to bring it close to teaching, learning, research, development and other activities. Teachers and other experts are in a strong position to ignore attempts at continuous improvement that they do not accept, because only they can do the work, which is not necessarily even observed by their superiors.

The quality map emphasises the role of the environment in strategic planning. It is important to take account of education policy and regional needs in strategic planning and reconcile them with the internal resources of the organisation. The role of the management process is to communicate and implement the strategic plan in the internal processes of the organisation. In addition, the role of the management is to apply the quality cycle of continuous improvement to the internal processes.

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