Abstract

This paper addresses factors that seem important for the quality assurance system and for improvement of educational quality at the Norwegian University of Science and Technology, NTNU. Further, it indicates how a national report from the Norwegian Agency for Quality Assurance in Education, NOKUT, could influence quality work at NTNU.

The main contribution of the study is the model for meaning, motivation and learning (MML-model). This model indicates that educational quality should be defined in order to know *what* the university is working to improve. A meaningful quality assurance system is important to ensure engagement in the organization. Leaders at NTNU have a responsibility and an opportunity to motivate to quality work by communicating *why* educational quality is important. Documentation is useful both as academic and administrative tools for organizational learning. It is crucial to know *what* and *why*, before focusing on *how* quality work should be organized.

Meaning, motivation and learning: factors for educational quality at the Norwegian University of Science and Technology

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1. Introduction

In February 2013 the Norwegian Agency for Quality Assurance in Education, NOKUT, published their evaluation of the quality assurance system at the Norwegian University of Science and Technology, NTNU. The report presented significant deficiencies in the university quality assurance system. For the past two years having worked as a student representative I have become interested in how NTNU can reach its strategic goals of educational quality and use the quality assurance system to enhance educational quality. This interest influenced my studies in political science at NTNU - and finally turned into my bachelor thesis in May 2013. The case study is based on interviews with two leaders of educational quality at NTNU and documental studies of NTNUs strategy and the quality assurance system.

To narrow down my case study I asked: How can a report from the Norwegian Agency of Quality Assurance in Education, NOKUT, influence the quality work at NTNU? What are important factors for the formulation of strategic initiatives for educational quality at the university?

2. What is educational quality?

The use of the term *quality* in governmental documents has increased during the last years. The work on quality in higher educational institutions (HEIs) should be seen within the context of quality work in public sector more generally. It could also be seen as a consequence of the interest in New Public Management and goal-oriented management since the 1980's (Michelsen and Høst 2012). There are several studies on the national governance of HEIs in Norway, but very few are taking a closer look on the individual institutions. Former studies have shown that success with quality work is associated with the work being firmly rooted in the organization (Stensaker 2000).

Therefore my main goal was to find out what should be the basis for quality work at NTNU in order to take quality forward.

Educational quality is often used as a term in strategies and management documents at HEIs. However few define *what* educational quality is. I assume that how we evaluate quality and how we ensure quality is closely related to our understanding of this term. National reports have introduced different approaches to educational quality (NOU 2000:14). NOKUT has defined educational quality as the facilitation of students learning and students learning outcome (Terje Mørland 14.05.2012). Hackmann and Wagemann (1995) point out that it does not exist an overall definition of educational quality. But without relating educational quality to something or someone, it is not a meaningful term (Michelsen and Høst 2012). Before any meaningful quality work can be done, the term therefore has to be defined. Only this way can the institutions understand what it is they are striving to achieve.

NOKUT is evaluating each individual quality assurance system at least every sixth year. The evaluation shall be made on the basis of whether the system is comprehensive and rooted in the institution's management, and whether it provides information that is analyzed and communicated to those responsible. Moreover, whether knowledge is the basis for action aimed at improvement and development. The reviews that do not approve the quality assurance system, give the educational institutions six months to correct the deficiencies before a reconsideration is made (NOKUT 2013b).

3. How a national report influence internal quality work

After receiving the report, NTNU made a statement to the media with the following quote: "*We know that education at NTNU is of high quality, but we have not been good enough at systemizing procedures to ensure that quality deviations are detected and corrected at every stage*"(NTNU 2013d). NOKUT does not evaluate the quality of the institutions, but how institutions systematically ensure quality. Hence, NTNU alone is responsible for creating a quality assurance system that can be used as a tool to improve the education they provide. This systematic

work seems to be a challenge at NTNU. In the past months, there have been two important questions for further quality work: How can NTNU ensure quality if they do not have a well-functioning quality assurance system? And perhaps even more important: How can NTNU work strategically to enhance educational quality if they do not know what to improve?

The report has been followed by a greater awareness about quality work in the organization. A potential outcome of this work could be that quality work is developing from something different stakeholders within the organization are doing to something they are aware of doing. In this way, awareness could lead to a broader involvement in the organization. NTNU's quality assurance system is developed from former experience from the institution and from national criteria. The Board of NTNU has the overall responsibility for the system, which is intended to be a tool for achieving the goals of quality education as outlined in NTNU's strategy (NTNU 2012). However, to ensure educational quality the broad part of the organization needs to be involved and engage in order to take quality forward. What are important factors to succeed with quality work at NTNU?

4. Important factors for strategic initiatives at NTNU in order to take quality forward

The creation of a meaningful quality assurance systems for educational institutions require the involvement of academic staff both in design and implementation, recent case studies show (Stensaker 2000). Whilst several educational institutions in Norway did not include academic staff, NTNU had a broad-based group of the organization involved in creating their quality assurance system (ibid. 2006). NTNU's description of educational quality states: "*The main goal of NTNU's quality work is the improvement of teaching and learning*." It is followed by a list of four points for what to do in terms of measures of educational quality: 1) All courses and programs shall be evaluated and developed continuously, 2) Duties and responsibilities in quality work should be clearly defined and communicated to both employees and students, 3) Quality work should be followed by measures to further develop the quality of education, 4) Documentation of quality work should

be available to those concerned (NTNU 2013c). Neither NTNU's strategy nor the quality assurance system of education gives any definition of educational quality. The main focus is on *what* should be done to ensure quality and *how* this should be done.

4.1 Meaning

Education quality is a term used in both strategy and quality assurance system, but the lack of content makes it difficult to know when it is not communicated what the term means. There is also a lack of content at the national level, where the politicians have been careful to define education quality. On the other hand, the national agency, NOKUT, evaluates whether the institutions are doing systematic work to ensure educational quality. Could this share of management between the national level and the institutional autonomy be why the university failure to clarify a definition of educational quality? A previous study of quality assurance systems at the major educational institutions in Norway showed that those who had succeeded best to demonstrate quality improvement within the organization had managed to link quality improvement with institutional characteristics (Stensaker 2000). The study also showed that those who had managed to define quality were more successful in providing direction for the quality work (ibid.). Therefore, the institutions own characteristics should be used as a basis when educational quality is defined. This is mentioned as one of the main challenges when working with quality at NTNU. Furthermore, by defining educational quality on the basis of NTNU's characteristics, the organization is likely to obtain ownership of the concept. Could this be a successful way to motivate all levels of the organization to quality work?

The first challenge at NTNU can be summarized in the challenge of making a meaningful quality assurance system. The system can be seen as a tool for control rather than a tool for strategic development. Proximity and understanding of the system appears to be an important factor in creating meaning among educators. Educators are an important part of the organization, since they both act as mediators from department to students and students to department. Making sense of the system is an important factor for the quality work of the organization, but

beyond understanding *what* to change, there must be an understanding of *why* quality assurance is important in order to take quality forward.

4.2 Motivation

How do NTNU create a quality assurance system that is understood and used as a tool for organizational learning? Who has the responsibility to create motivation for quality work? The Board has the overall responsibility for quality assurance at NTNU, but the responsibility for the system to be adapted and adopted follows the line with responsibility through rector, deans and department heads. From department heads, the road continues to the academic employees. It is not the number of processes, systems and strategies that are essential if management and employees do not see the value and benefits of working systematically with quality. In order to reach strategic goals, there must be a motivation for the development of the organization (Mikalsen 1997). For many, reporting and being monitored of actions are not experienced as meaningful and motivating (ibid.). How can NTNU develop measures that both meet the national requirements for a quality assurance system and at the same time create commitment and understanding within the organization?

Employees often ask why they should engage in quality work. An important answer may be that quality work provides a basis for improvement of the organization and the learning of the development also ensures a consistent quality improvement (Mikalsen 1997). Quality work, however, requires a broad involvement of all organization employees (Mikalsen 1997). Responsibility for the adaptation and implementation of quality assurance system lies with the leaders of the organization. This responsibility includes motivating employees. How does NTNU ensure the engagement of the organization in quality work? In August 2013, there will be a change of leadership in most parts of the organization. Guiding and training in the quality assurance system for department heads will be an important way to go for a system that is firmly rooted in the organization.

Although the leaders are responsible for the quality assurance system, the whole organization should be more active in the design of measures. Closeness to the quality work allows more of the organization to identify with initiatives, and the possibilities of integrating measures are larger (Funnel and Rogers 2011). A study where NTNU was compared with other educational institutions in the late 1990s, showed that NTNU's focus on educational quality as a tool for change tended to be seen as an administrative matter, and that there was a desire for efficiency behind quality improvement (Stensaker 2000). It would appear that there is a need to communicate the academic development potential within and as a result of the quality assurance system. The system should not be a system merely for control. This may especially be important in periods when an organization is experiencing changes (Mikalsen 1997:12).

I have now mentioned meaning and motivation as two factors for the development of strategic initiatives for quality improvement. The third factor I have found is the need for a quality assurance system that encourages learning. How can NTNU as an organization utilize both the external report from NOKUT and internal reports for quality improvement? There is a need to understand what to improve and why, before one can use a quality assurance system as an arena for learning in the organization. Only then will anyone be able to formulate strategic initiatives that points out how quality improvement can and should be done. The last question will be discussed in the next sections.

4.3 Learning

"*The goal of reporting and documentation is to provide a sound basis for implementing appropriate initiatives*" (NTNU 2011:5). Reports are essential for recognizing differences and progress. They can be seen as information that can be used in the design of new measures .This is also supported by Deming (1982) who believes that an organization should use statistical analysis to gain knowledge about the organization and to optimize processes.

The quality assurance system should act as such a tool to assess the quality and obtaining knowledge of education at the institution (NOKUT 2013a). However, it

can also be used to identify what does work. A well-functioning quality assurance system is created in an organization that understands the meaning of the system and which is motivated to use the quality assurance system as a tool for strategic development. In this way, learning in the quality assurance leads the organization to recognize improvement.

5. Model for meaning, motivation and learning

Meaning, motivation and learning seem to be three key factors for quality of education at the university. I have therefore developed a stepwise model that examines the various factors that may be important to realize the strategic goals of educational quality at the university. The model presents factors that can contribute to organizational learning, through becoming more aware of the institutions abilities.

Focus on quality work

- An external report from the Norwegian Acency for Quality Assurance in Education leads to awareness on quality work within the organization.

Meaning

- An institional definition is imporant in order to get quality work rooted in the organizational charachteristics. Important step to know what should be improved to enhance educational quality.

Motivation

- Leaders should motivate with focusing on why quality work is important.
- Quality work should be communicated as both an academic and administrative tool.

Learning

- Reports and documentation to implement appropriate initiatives.

Educational quality

- Understanding what, why and how is essential steps to take quality forward. A meaningful quality assurance system is depending on a broad involvement and motivation in the organization.

6. Conclusion

Based on the findings of this study, meaning, motivation and learning are three factors that must be present rooted in the organization for the strategic initiatives for education quality at the university. It is too early to conclude on effect the NOKUT-report, but it is reasonable to assume that it has led to an awareness of educational quality. This awareness should be used strategically.

Awareness of quality in the organization is an important starting point for the enhancement of educational quality and a well-functioning quality assurance system. In order to make sense of quality work, it is important that NTNU make a definition of educational quality which is rooted in institutional characteristics. There is a need for measures that create motivation for quality work. This point is closely related to the point of meaningful quality assurance system, but still adds a more proactive approach to quality work. The organization must first understand the meaning of educational quality and *what* the term implies, and then focus on *why* quality work is important. Strategic initiatives at NTNU should have an academic as much as an administrative focus. It seems like quality work is easily perceived as control, rather than something that makes sense and creates motivation. Leaders at NTNU have a central role and responsibility to encourage to quality work.

The last point involves *how* quality work can be rooted as a strategic tool for improvement. When you manage to create meaning and motivation in the quality assurance system, this system will be a useful tool both to detect deviations and development. Without a functioning quality assurance system, it is difficult to identify this. The quality assurance system should be used as an opportunity for learning within the organization - and to build on the factors one sees that promotes quality.

Meaning, motivation and learning are put into a stepwise model that suggests how measures can be designed in order to achieving the strategic goals of quality. My assumption is that this model does not solve the challenges of quality work, but

that these factors will affect the success of the work in designing and realizing measures of education at NTNU.

References

Funnel, Sue C. and Patricia J. Rogers (2011). *Purposeful Program Theory: Effective Use of Theories of Change and Logic Model.* San Francisco: John Wiley & Sons, Inc.

Hackman, J. Richard and Ruth Wageman (1995). "Total Quality Management: Empirical, Conceptual, and Practical Issues", *Administrative Science Quartely*, 40 (2):309-342.

Michelsen, Svein and Håkon Høst (2012). *«Kvalitetsarbeid, kvalitetsstyring og kvalitetsvurdering» i Kunnskapsgrunnlag og faglige perspektiver for en studie av kvalitet i fag- og yrkesopplæringen.* Rapport nr.1. Oslo: Nordisk institutt for studier av innovasjon, forskning og utdanning.

Mikalsen, Finn (1997). *Kvalitetsutvikling. En veiledning for offentlig sektor.* Oslo: Tano Aschehoug.

Mørland, Terje (14.05.2012). *«Kan utdanningskvalitet måles? Innlegg på konferansen «Hva er kvalitet i utdanning»»,* NOKUT.

NOKUT (2013b). *Om NOKUT.*

NOU 2000:14. *Frihet med ansvar*, Kunnskapsdepartementet

NTNU (2011). Kunnskap for en bedre verden. NTNU – internasjonalt fremragende. Strategi 2011-2020. Available from http://www.ntnu.no/ntnu-2020

NTNU (2012). *NTNUs system for kvalitetssikring av utdanningen. Vedtatt av Styret 13.juni 2012.* Available from

http://www.ntnu.no/documents/7305088/0/NTNUs+system+for+kvalitetssikring+av+utdanning.pdf

NTNU (2013a). Kvalitetsprosesser. Available from
http://www.ntnu.no/utdanningskvalitet/kvalitetsprosesser

NTNU (2013c). Utdanningskvalitet ved NTNU. Available from
http://www.ntnu.no/utdanningskvalitet

NTNU (2013d). NOKUT-rapporten om NTNU: Kvalitet på utdanningen, men mangelfullt kvalitetssystem. Available from
http://www.ntnu.no/aktuelt/pressemeldinger/13/nokut-rapport

Stensaker, Bjørn (2000). *Høyere utdanning i endring. Dokumentasjon og drøfting av kvalitetsutviklingstiltak ved seks norske universiteter og høgskoler 1989-1999.* Rapport nr.6. Oslo: Nordisk institutt for studier av innovasjon, forskning og utdanning.

Stensaker, Bjørn (2006). *Institusjonelle kvalitetssystemer i høyere utdanning – vil de bidra til bedre kvalitet?* Evaluering av Kvalitetsreformen. Delrapport 2. Oslo: Nordisk institutt for studier av innovasjon, forskning og utdanning.