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Strategic Curricular Change: A Case of the Norwegian Medical School in Tromsoe

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Abstract

In this qualitative study, we aimed at exploring a curriculum development process that took place at the Medical School of the University of Tromsoe during a period of seven years. We applied the literature on organizational change in order to understand the curriculum development process. Our findings show that this process can be seen as a strategic organizational change, in which strategic actors act as sense makers for the rest of the organization.

Our study contributes to the literature on the curriculum development process by emphasizing the role of organizational actors and strategies used in order to bring about the desired curriculum change. One important implication of our study is the strategic dimension of curricular change, which emphasizes an important but poorly understood aspect of the curriculum development process. One limitation of this study is that we focused mainly on the initial stages in the process.

Keywords: Strategic change; Medical education; Hospitals

Introduction

The curriculum is the backbone of schooling. It is a steering document that gives the premises for the forms of knowledge, skills and attitudes that are being taught. As a result, different social groups may try to influence the content of the curriculum [1].

In medical education, different aspects of curriculum development and implementation have been a topic of interest for a long time [2]. Medical curriculum development and implementation has often been discussed from either a design perspective, which is based on well-established models, or other perspectives that are specifically dealing with some particular contents [3]. Recently Bailey et al. [3] have conducted a study of team approach to curriculum development and implementation in medical education. Their findings suggest the importance of understanding a collaborative process by the faculty involved in the curriculum development and implementation. Furthermore, in a study about complex and challenging curriculum development and integration, Quintero et al. [4] emphasized the importance of an in-depth understanding of the revision process, as well as the reasons why the revision has been carried out. Other authors seem to agree with these findings. For example, Cruess and Cruess [5] have suggested that to introduce longitudinal medical educational programs is a rather challenging process. They also underlined that: "Absolute support from the leadership of the institution is required as is collaboration and sustained efforts of individuals and academic units" [5]. Along the same lines, Holden, Buck and Luk et al. [6] emphasized the importance of fostering collaboration, common language and understanding of the medical curriculum revision process. Moreover, they argued that a key success factor to achieve the intended changes is the role of the faculty management.

In this paper, we apply the literature on organizational change in order to understand the curriculum development process. Studies of strategic change in higher education have suggested that to understand and manage change, it is necessary to examine symbolism, sense-making and influential processes that create and legitimate the meaning of the change [7]. We present a case of the curriculum development process at the Norwegian Medical School in Tromsø. The Norwegian Medical School in Tromsø has been established in 1971, as the third medical school in Norway. It also paved the way of the establishment of the University of Tromsø in 1971. Since its establishment, several unsuccessful attempts have been made to revise the curriculum in the 1980s and 1990s. For a purpose of this paper, we collected qualitative data on the curriculum development project in a period of seven years, from 2005 to 2012.

In what follows, we will first present our conceptual framework involving sense-making, ambiguity and coordination. Next, we review the methodological approach. Then, we present a narrative of strategic change at the Medical School in Tromsoe. Finally, we discuss the findings and the practical implications of the study.

Sense-making as strategic change in higher education

In instigating strategic change in the higher education context, processes of sense-making and sense-giving are considered essential [8]. Sense-making and sense-giving can be described as involving processes whereby CEO (chief executive officer, in this particular case the university's president) and top management team first tried to figure out and ascribe meaning to strategy-relevant events, threats, opportunities, etc. and then to construct and disseminate a vision that stakeholders and constituents could be influenced to comprehend, accept, and act upon to initiate desire changes [8].

Weick [9] discusses seven properties of sense-making. First, sense-making is grounded in identity construction meaning that one has to define oneself. Second, sense-making is a retrospective process in which the sense-maker is able to take the context into consideration, and as a result, meaning is attributed to an event retrospectively. This is best explained by Weick's celebrated phrase: "how can I know what I think until I see what I say?" [9].

Third, sense-making is the active creation of the environment in which people "act, and in doing so create the materials that become the constraints and opportunities they face" [9]. Fourth, sense-making is a social endeavor that exists at two levels: the individual and the group. At the individual level, the emphasis is on social ties and interactions in order to understand the information gathering and interpretation, as well as the actions of individuals based on the information and their interpretation. At the group or organizational level, sense-making opens up shared frames of reference, or collective sense-making. Fifth, sense-making is an ongoing activity. Sixth, sense-making is "focused on and by extracted cues," which emphasizes the importance of how people take cues for their actions from their everyday sense-making. Finally, sense-making is "driven by plausibility rather than accuracy," which is about "socially acceptable and credible" stories that help to explain and to energize action efforts [9].

Strategic change management represents a period of organizational transformation. During the transformation, the process of change is characterized by uncertainty and ambiguity [10]. Uncertainty and ambiguity are seen as two occasions for sense-making [9]. The notion of ambiguity refers to "an ongoing stream that supports several different interpretations at the same time," [9] whereas uncertainty refers to "an individual's perceived inability to predict something accurately" [11].

Several ambiguities may prevail during the process of strategic organizational change [12]. One is the ambiguity of intention. Environmental pressures increase the dilemma of organizational members regarding what to do and what choices to make. This issue is even more evident in situations where organizational members are forced to look for solutions outside their institutional environment. Furthermore, Hollinshead et al. [13] claim that different stakeholders in organizational change contribute to various interpretations and versions of events. This observation suggests that strategically ambiguous plans and mission statements are being interpreted by various constituencies. As a result, ambiguity then represents an occasion for the coordination of action. Indeed, under ambiguity, organizational change becomes a process that needs to be coordinated. Many definitions have described the concept of coordination. Literature suggests a number of typologies on both formal and informal coordination mechanisms. On the one hand, formal typologies refer to a centralized and formalized coordination achieved through a well prescribed hierarchical organization [14], formal planning [15], mutual adjustment [15,16], or liaison roles [14], to name a few. Informal coordination mechanisms, on the other hand, involve 'coordination without hierarchy' [17] or 'coordination by dominance of one idea' [18]. The latter suggests that (informal) coordination is achieved by sense-making or creating meaning in everyday life.

In dealing with ambiguity, the first step in any change process is the creation of a recognized need for change by the people "whose energy is required for change to happen" [19]. In other words, it is up to the individuals who hold significant power in the organization, usually based on resource dependency, to determine the direction for change [20]. In addition, individuals must be empowered to act to change the organization, since power itself will not bring about change. These actors can then be considered strategic actors in the organizational change process. Thus, the strategic actors' interest in bringing about change and in making coalitions in promoting certain organizational responses is most important for change to happen [8,9]. In particular, we can assume two main preconditions for change.

First precondition is the organization's need for legitimacy, which may alter the values and interests of key organizational actors and, in turn, lead to an organizational change [20]. Altering of the values and interests of the key organizational actors may be understood as the process of sense-making, which involves the "construction of meaning and reconstruction of the involved parties as they attempted to understand a nature of change" [8].

Second precondition is the ability of powerful organizational members to infuse value in the new activity or rule [21]. Thompson [15] emphasized the role of influential individuals in an organization that has widely dispersed power. He also proposed that such individuals can manage the coalition. Agenda-setting and coalition-building are two methods for maintaining influence in organizations [22].

Methods

In this study, we utilized a semi-structured interview guide for data collection. We interviewed 14 persons, whereas one person sent a written description of the revision process according to that person's point of view. The informants were purposively selected, because they had relevant knowledge about revising the curriculum at different levels of the change process. In particular, we interviewed four deans, two vice deans, a study leader, three department heads, and four leaders of different medical themes of the study program. The individual interviews that lasted around 60 minutes each were conducted by the same researcher in the Norwegian language. The semi-structured interview guide was followed to ensure that the actual themes were discussed by all informants.

Follow-up questions were also used for purposes of both clarification and further in-depth questioning. At the end of each interview the researcher gave a summary of the session and presented a brief feedback of her understanding of the main points in order to avoid misunderstandings that could influence on the validity of the study.

Each interview was recorded and then transcribed word by word in the Norwegian. The transcribed text was read and reread several times to get an impression of the data collected. Then the actual themes were identified and coded through thematic coding that included both deductive and inductive codes. Thematic coding is a balance between deductive coding derived from the applied theoretical framework and inductive coding emerged from the collected data [23]. This approach represents a correct description of our data analysis as the thematic coding was driven by the emerging data in correspondence with our theoretical framework. Thus the analysis became a synthesis of those two aspects. Cohen et al. [24] claim that this process is preferable as it is more faithful to the data.

Secondary data involved two of the most important reports that originally gave the premises for the curriculum revision process Roald et al. [25] and Hasvold et al. [26].

In the next section, based on the data collection and analysis, we present a narrative in chronological order of the strategic curricular change performed at the Medical School in Tromsoe.

Strategic curricular change at the medical school in Tromsoe

As already mentioned, the University of Tromsoe, the Norwegian Arctic University (UiT), was established in northern Norway because medical researchers had shown that the medical condition of the population in the north was below average compared to those in the rest of the nation. This decision was made by the Norwegian government after years of discussions and argumentation concerning the need for improved medical services in northern Norway. Thus, the need for a medical school was why the northernmost university in the world was established. In this way, the third School of Medicine in Norway became a reality, and the making of physicians in the north started in fall of 1973 [27].

The medical program represented a new way of thinking about education and was said to be at the forefront compared to the two other medical programs in Norway [28]. In creating the curriculum, faculty members visited influential medical schools worldwide to get inspiration. The program involved several basic perspectives: integration between theoretical and clinical aspects, patient contact at an early stage in the education process and extended practice at local hospitals and with practitioners. Integration of the biological, societal and clinical dimensions was strongly emphasized. Likewise, the program stated that students' perspectives on learning should be in focus, as well as integration of different subjects and teaching based on problem orientation. These aspects were seen as new and revolutionary compared to traditional medical education. Thus, a new and progressive identity was constructed concerning medical education in the north [23]. This identity has been the image of the medical school in Tromsoe. Until today, it has been important to maintain this image and to develop it further. However, this process has seemed to become demanding.

To keep up the image of a progressive medical school, several attempts to revise the curriculum was made during the 1980s and 1990s. All of them, however, seemed to fail in some way. The interview data showed that the different revision committees at that time consisted of local actors many of whom were former students.

In 2005, the dean decided to appoint a Scandinavian committee (the Roald committee) consisting of external actors to evaluate the program. Shortly after the appointment of the commission, the dean left the program as her term had expired. The dean later explained that it was important to get external actors to evaluate the whole process. The basic idea was to engage people from outside who deal with medical education to have a new and open look at the education process. The Roald committee was appointed by the school to evaluate the program's content and the teaching methods. The committee delivered their report in 2006 [25].

In the report's conclusion, the Roald committee [25] stated: "Concerning the curriculum there is a great potential for improvement". In this context, the committee focused on the content and how to organize teaching in order to stimulate learning. Further, the committee suggested that the school should keep up with the basic values and principles on which the study program had been based since 1971 as these principles were said to be progressive and at the forefront. In this respect, the committee focused on the integration of epistemological knowledge and clinical practice and the involvement of hospitals and practitioners that represented an important part of the identity of this medical school. The Roald committee also suggested that a revision of the study program should begin with the first year continue throughout the program. In addition, a particular focus in the revision should be on integration between theoretical basic knowledge and clinical practice.

By the time the Roald committee was appointed, no complete revision had taken place. The commission concluded that the curriculum had been transformed into fragmented parts, since some teachers privatized parts of curriculum and operated independently. As a result of this fragmentation, the original basic values and principles (i.e., integration of the biological, societal and clinical dimensions and teaching based on problem orientation) had faded away.

During the 2005–2009 period, the school had two deans; each lasted for 2 years. During the first 2 years, the revision process was followed up closely by the dean. The Roald committee gave the premises for further development, and a new report, Educating Doctors of the Future. Revision Principles of the Medical Study Program at the University of Tromsoe, was written with the dean in charge [26]. This report was based on the same values and principles as the Roald report and describes, among others, what kind of challenges the physicians will meet in the future at the macro- and micro-levels. The Hasvold et al. [26] report gave the premises for further progression. It was further emphasized that some dimensions had developed into directions that were not wanted. The Hasvold et al. [26] report also made it clear that it was important to evaluate study programs.

The intended changes of the curricular revision process can be related to the two basic documents presented above and referred to as The Roald report [25] and the Hasvold report [26]. Together these two reports gave the premises for further revision of the study program where the following basic principles were stated: orientation towards students' learning, problem based learning, integration of different subjects and themes, and orientation to praxis.

During the 2005–2007 period, the school's management continuously presented and discussed arguments for the need for the revision. International professionals were invited to give lectures. In addition to seminars, workshops and kick-off seminars were arranged. The informants of this study stressed the importance of a kick-off seminar where the participants received important information related to the need to revise the study program. In addition, the participants expressed the importance of the revision process and emphasized that people, in general, seem to have been very positive about the change.

From 2007 to 2009, the faculty management got a new dean and during this period, no progression took place as far as the revision process was concerned.

In 2009, the school got a new dean and a new vice dean for education, who pushed the revision process back on the track. Two team leaders commented as follows: "Much voluntary work has been done in order to get the process on track" (team leader A). "There have been different challenges along. However, the faculty management and the department management have had a strong will to get the process on track. There has been a good cooperation between important actors" (team leader B).

It was important to convince faculty staff of the need for the revision by visiting foreign medical schools and listening to their experiences. During the first year of implementation, many actors realized that the revision was desirable. Thus, the vice dean concluded:

Some of the teachers who were team leaders the first year became strong defense lawyers. They told other actors that the revision in fact was very fruitful concerning teaching and learning, and they also told that the students worked hard.

The dean and the vice dean were both former medical students at UiT. In addition, the vice dean had participated in some of the previous revision efforts. The two expressed that they felt a kind of ownership and pride related to the study program. Both emphasized that their cooperation and the division of work for which they are responsible are a good process. This good working relationship was also emphasized by other informants, including a team leader: "The process has worked very well because there has been a clear leadership represented by the deans, last time it did not work like this." Another team leader stated, "The deans work very well together." The dean and the vice dean in charge are now in their second period of faculty management and will continue until 2017.

The dean emphasized the importance of establishing a governance board in 2010, consisting of external actors with great influence, such as the director of The University Hospital. The governance board has eight members, and four are external actors. This was an important move in order to justify the process. The dean was the head of the governance board and commented that the cooperation between the university and the hospital is satisfactory.

The importance of dialogue in the revision process was clearly emphasized by the informants. A team leader stated, "You do not solve problems by writing e-mails." Another team leader stated, "It is important to visit people in their office instead of writing e-mails to them." If some actors did not act in accordance with the plan, they were asked to visit and discuss it with the dean, the vice dean and the respective department head. Then the result was written down and referred to in order to make sure that a common understanding was established.

According to the dean and the vice dean, the three department heads played an important role. During the first period of implementation, the dean, the vice dean, three department heads and the leader of the study program met regularly to discuss the curriculum development process and its progression. Their meetings continued in later stages, in order to discuss particular cases.

The dean and the vice dean, as well as the head of the department in question, pointed to the fact that some challenges were related to one department as many of the medical teachers there have full-time jobs at the hospital as doctors and part-time jobs at the university as teachers. This situation is said to be stressful and demanding for all as far as a successful implementation is concerned. However, this is how the system works today when physicians from the University Hospital are teachers at the Medical School. In the future, the

intention is to extend the part-time jobs at the university in order to make the cooperation smoother.

Since 2009, the vice dean for education has focused on the importance of getting the revision process on track. As an actor in the revision processes that had failed, the vice dean previously had concluded that the failure could be related to the lack of extra resources. Today, her conclusion has changed:

But later on I have thought that in fact it was lack of support from the faculty management that was the greatest problem. And you may say that what distinguishes the previous process from the ongoing is in fact that the faculty management has pushed forward the process to make something happen, and something happens.

All the informants stressed strongly that the process was extremely demanding to initiate and follow up. There were different challenges to cope with as the dean observed: "We fumbled in the beginning because we did not have any experience with a process like this."

The importance of enthusiastic actors was expressed among nearly all the informants exemplified by this team leader: I must say that we have achieved very important results and the reason why is the fact that there are some enthusiasts with a great capacity of work and a large professional dedication who have managed to implement important things in spite of unclear conditions and inexpedient organization.

In this demanding and successful process of implementing a new study program, the informants agreed that the change was made step by step. The informants, especially the team leaders, also stated that no one could have imagined how much work this revision process would entail. Many actors were involved in the process, including students. The students' participation is regarded as a great success combined with the other aspects mentioned.

Discussion

The chronological order of events that happened during the organizational restructuration of the Medical School in Tromsoe can be seen as an example of the coordination under ambiguity process. This process indicates sense-making activities of the school's management in order to promote strategic curricular change. The empirical case of the Medical School in Tromsoe indicates that the strategic change was carried out in several steps.

First, the identity construction process, as suggested by Weick [9] took place. The data showed the organization aimed at being a leader among the Norwegian medical programs. To achieve this, the management team embarked upon the curriculum change by being inspired by the most prestigious medical schools worldwide. The identity construction process had many challenges, however. The management dealt with these challenges with several curriculum revisions in the 1980s and 1990s. The curriculum revisions can be seen as further attempts to construct identity while searching for more plausibility [9]. In addition, the data showed that former students played an important role in the revision committees.

Second, the legitimization of the whole strategic change process [20] as indicated in the data, was part of the school management's agenda-setting [22]. The legitimization process is illustrated by the fact that the Roald committee was set up to revise the study program in 2005. The Roald committee involved an external evaluation group, and that was why its report was used for legitimization purposes. Suggestions from the Roald committee's report paved the way for the school's management to continue the curriculum revision process as part of the strategic change process. The Roald committee's report was followed up by another report [26] that gave the premises for further work on the revision process.

Third, the school's management insisted on active creation of the environment for change [9]. As shown in data, during the 2005–2007 period, the management promoted arguments for the need for revision in several arenas, including numerous workshops and seminars. These efforts could be considered part of sense-making: an ongoing activity involving cues for action [9].

Fourth, the importance of strategic actors [21] was illustrated in the data. Two former students became a dean and a vice dean for education in 2009. They felt ownership over the revision process from the beginning. The action of this type of strategic actor, as well as coalition building, are important activities for carrying out the change. As a result, the dean established an external governance group involving the hospital director, among others. This move strengthens the university–hospital link further in this particular case and provides further legitimization for the curriculum change process.

Finally, the strategic change process can be seen as taking place under highly ambiguous circumstances [12]. For example, all informants shared the same opinion about the intention of revision, although they did not necessarily agree about how the revision could be implemented [13].

Conclusion

In this paper, we aimed at exploring a curriculum development process that took place at the Medical School of University of Tromsoe during a seven-period. The results show that the curriculum development process can be seen as a strategic organizational change, in which strategic actors act as sense makers for the rest of the organization. Sense-making involves not only a new identity construction for the organization but also the legitimization of the change process, as well as active creation of the environment through the sense-giving activities. Sense-making, in this particular case, can be understood as the coordination of activities under highly ambiguous conditions.

Our findings support previous research that emphasized the importance of in-depth understanding of the curriculum development process [4,6], collaborative nature of the process

[3,6], as well as the active role of the school's management in the process [5,6].

This study contributes to the literature on curriculum development process by emphasizing the role of organizational actors and strategies used to bring about the desired curriculum change. One important implication of the study is the strategic dimension of curricular change, which emphasizes an important but poorly understood aspect of the curriculum development process. One limitation of the study is that we focused mainly on the initial stages in the curriculum development process. Further research may focus on additional strategies that are present in more mature curriculum development processes.

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