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Educating Managers in Knowledge Intensive Organizations

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Abstract: Education boosts leaders' confidence and competence level. A survey undertaken at Hedmark University of Applied Science shows that managers that enroll in studies in Organization and Management claim that studying has been a support in their development as managers, and has contributed to their confidence and competence level. In an increasingly more competitive market, strategies on Knowledge Management (KM) seem more important than ever. By being able to assimilate, develop and share knowledge, organizations are able to stay competitive. The organizations thus need managers that accept, understand and can work with KM principles and strategies. KM is defined by Davenport(1994) as being about capturing, distributing and making sense and use of knowledge. In all the courses in the year program, there are elements from KM. However, it is not enough "knowing what", this needs to be supported by "knowing how", terms coined by Gilbert Ryle (1949). Supporting the process of going from declarative knowledge to procedural knowledge can be undertaken by e.g. features from Senge's five disciplines(Senge, 1992), in particular team learning, systems thinking and shared visions. Underlying team learning, systems thinking and sharing visions, are reflection and how to utilize reflective methods. Student active methods embrace activities that facilitate reflection and reflective thinking, and experiencing. This paper presents how KM principles and strategies are supported in the education of leaders using the different student active methods. The data are mainly retrieved from a survey, and are supported by data from interviews and observations. The data from interviews are "member checked" to secure validity and credibility issues.

Keywords: competence, knowledge management, reflective practitioners, student active methods

1. Introduction

Hedmark University of Applied Sciences has for many years offered study programs in organization and management, both part time and full time. The target audience for the study is managers and others in administrative positions. Our department in Organizational studies and management is located at Campus Rena, and the program in focus is offered both on-campus and off-campus, and also as online-courses. The courses in the program include learning about how organizations work, administrative law, legal issues and legislations, different management theories, knowledge distribution, understanding markets and how they influence the development of the organizations. The courses have different approaches to how they are presented and taught, adapted to the content of the different courses. The students get to practice different approaches in different courses. Some courses use group work and practical assignments, other courses use written assignments. A lot of work has been done to offer good lectures and to provide good feedback on how the students perform. It is also important to measure the student's satisfaction as the students can be future promoters of the university (Pelau, 2015).

KM is about collecting, disseminating, and making use of relevant knowledge (Davenport, 1994). By combining both lecturing about KM principles and strategies and making use of features used in KM work in organizations, our aim is to provide a useful and meaningful education for managers and administrative personnel. Although studies show that workers claim to learn more in their workplace rather than externally (via courses or study programs) (Filstad, 2010), there is still a need for the study programs. To meet the challenges of a knowledge based worklife, the program has been through continuous development and revisions over the years. One of our means to develop the program is student evaluation, mostly short evaluations in the middle of the semester. The study in focus is the first large survey which includes a large population of former students. Our population includes four classes.

Earlier research on leadership training programs points at the importance of student active methods and the importance of learning through communities of practice and sharing knowledge in informal settings (Belling, James et al., 2004, Hybertsen, Stensaker et al., 2014, Lysø, 2009, Neyroud, 2010).

1.1 Student active methods

Motivation, activities, concretizing, variation, individualizing, cooperation and evaluation are key pedagogical features (Imsen, 2009). The student active methods include these features as student active methods embrace working in small and larger groups, assignments, and homework. An emphasis has also been to make use of the students own experiences. To share own worklife experiences and take part in others and be able to analyze and make sense of theory within the frame of worklife experiences, is basic within the study. To be able to use real life worklife situations, analyze them and gradually be able to work with them, should provide the students with experience that they should be able to utilize back in their own organization. Being in a study situation provide the students with real life situations to be discussed in a safe environment where different solutions can be discussed without it having any impact on or in a “real” organization.

1.2 Research question

Our motivation and research interests come from teaching and leading these management programs over many years. Further development of the programs depends on students evaluating both overall satisfaction with the program and how they evaluate the relevance of the program for their managerial work. A survey was conducted amongst the previous organization and management students in order to establish if and how the aim has been reached and how successful the program has proved to be. We were interested in finding out if KM features as well as teaching the students about KM strategies and principles supported their learning process. According to this our main research question is:

How do the students evaluate their learning outcomes of the program concerning both overall satisfaction and relevance?

In addition to overall satisfaction we are interested in what knowledge was learned, what skills were improved and what attitudes were changed. Arntzen et al (2009) claim that universities are “constantly re-creating existing teaching materials, instead of spending more time with students or doing research work”. This indicates that one should expand on the student inclusion with regards to the educational approaches. However, it is also important to improve on the teaching material and a constant renewal of teaching material is not cost effective as it often involves producing streaming video and presentations. A re-creation of this material can also provide time to spend time with students in order to follow up on developing skills and attitudes with the students.

We also focused on what happens when the students return to their jobs. How much transfer of knowledge, skills and attitudes occurs, and what change in job behavior occurs? In what way do they improve practical managerial skills? How do they reflect upon the theory presented in the courses?

Finally we are interested in knowing if the program had contributed to the organization and to organizational learning. In what ways do the students share knowledge with their leaders, colleges or employees?

2. Theoretical backdrop

In this section the theoretical backdrop is presented; the experienced learning outcome and knowledge management, including experiential learning.

2.1 Learning outcome

Measuring learning outcomes can be challenging for several reasons (Dysvik and Martinsen, 2008, Hole, 2014, Prøitz, 2010). Learning outcome can mean both the aim of the learning and the result of the learning. Sometimes the distinction can be unclear. Additionally, the measurement of learning result can be carried out in different ways. Both summative and formative evaluation is recommended. Formative evaluations are valuable during the programs and summative evaluations are useful at the end of the programs to measure to what extend the aim of the programs have been reached. Accordingly, both objective and subjective measurements can be useful. Subjective measurements are the student’s own opinions and experiences. Objective measurements are for example grades, throughput, and number of applicants. Our study aims to evaluate student’s subjective experience of their learning outcomes at the end of this one-year, part-time study program.

2.2 Knowledge management

Knowledge Management (KM) is according to Donald Hislop (2009) defined in several ways. The widest is by McAdam and McCreedy (McAdam and McCreedy, 2000) that states that “KM relates to the management of anything classified as knowledge”(Hislop, 2009). Different perspectives have triggered different definitions of KM. Von Krogh et al (2000) state that knowledge cannot be directly managed. They prefer to use the term “knowledge enablement”. They claim that workers cannot be forced to share knowledge. However, it is possible to indirectly manage the knowledge the workers have by using people-centered policies and strategies.

Davenport and Prusak (2000) have defined knowledge as: "a fluid mix of framed experience, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information". Using Davenport’s definition from 1994, that KM is about capturing, distributing and making sense and use of knowledge, provide a possibility of evaluating the research question (1994). Davenport’s definition can also be seen in conjunction with what Gilbert Ryle’s(Ryle, 1949) says is going from “knowing what” to “knowing how”. To not only have the theoretical or declarative knowledge but also have procedural knowledge.

To recognize and be able to make sense of what is interconnected regarding different occurrences can be linked to Peter Senge’s five disciplines and in particular Systems Thinking (Senge, 1992). Senge’s disciplines also include team learning, shared visions, mental models and personal mastery. These can all be related to Davenport’s definition as mental models and shared visions are about making sense of thinking and action, and personal mastery is about developing a capacity to seek out what is important and achieve it. The team learning is more on *how* to achieve it by collective intelligence through productive cooperation. Team learning also brings the element of *knowledge sharing*. Knowledge can be shared in many different ways, also through what Jane Lave and Etienne Wenger refer to as “Communities of Practice”(CoP)(Lave and Wenger, 1991, Wenger, 1998). CoP’s are defined as: “... groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly”(Wenger-Traynor, 2016).

Learning is also interconnected with reflecting. By challenging the students to come up with situations from their own worklife, they are also challenged to reflect. They are also to reflect upon their practice during their work on assessment and group work. By introducing reflection early in the study and maintaining it throughout, one seek to establish what Donald Schön refers to as “the reflective practitioner” (Schön, 1987, Schön, 1991). To be able to reflect “in action”, and also “before action” (Cowan, 2006) and “after action” will support an ongoing learning process. By being a subject to real worklife situation and working with assignments from a real worklife, the students have the opportunity to work through different issues. This “learning by doing” is of great value(Dewey, 1902, Dewey, 1938).

The learning by experiencing is also described by David A. Kolb in his “experiential learning cycle”(Kolb, 1984).

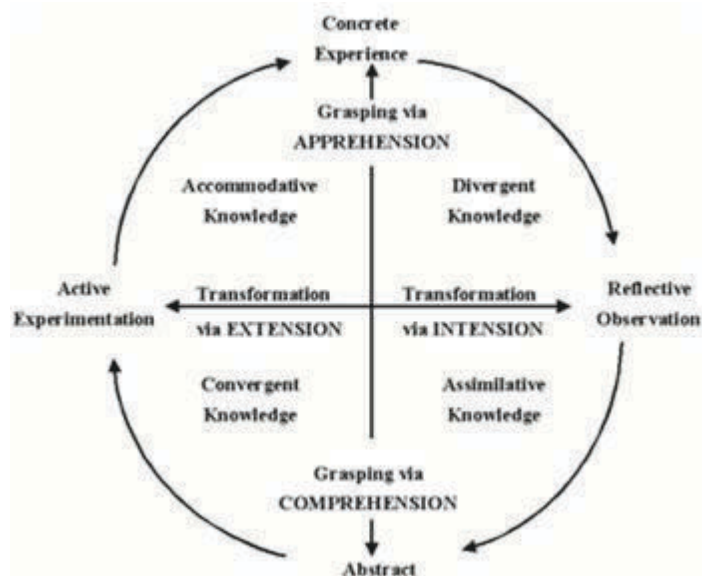


Figure 1: Kolb's experiential learning cycle (Kolb, 1984)

Through concrete experience (in student active methods as assignments and groupwork) they are to observe and reflect upon their experiences. Then they are to make sense of the situation by comprehending and then make use of the experiences and reflection in new active experiencing. This will again lead to a new concrete experience and the cycle is complete. Grasping is about making sense of and the transformation is about being making use of knowledge and thus become more knowledgeable and better equipped to handle similar situations.

This transformation is also what Jack Mezirow refers to regarding his term “transformative learning”. This is defined as “the process of learning through critical self-reflection, which results in the reformation of a meaning perspective to allow a more inclusive, discriminating, and integrative understanding of one’s experience. Learning includes acting on these insights.” (Mezirow, 1990).

3. Methodological approach

The data material for the analysis in this paper is a combination of quantitative and qualitative data. The quantitative material is collected from a survey conducted in 2015 amongst a group of former students of the study of organization and management. We wanted to know if the aim of the study program had been reached, and get the former students opinion about the management program, and its learning effects. What was the outcome of the study program, what did they learn from? We also wanted to know more about the impact of the study program and learning process on the participants’ development as leaders and how they view their own ability to execute leadership in their workplace.

The questionnaire has three sections: the first mainly with background data, then questions about the experienced outcome of the study, and some questions on the experienced impact on their worklife. When developing the questionnaire we used some elements of Kirkpatrick’s four level model of evaluating training programs. These are reaction, learning, behavior and results. *Reaction* means overall satisfaction, *learning* aims to measure what the students have learned, *behavior* questions if the students apply the new competencies at work, and *results* is meant to shed some light upon the outcome for the organizations and different workplaces (Kirkpatrick, 1998).

It was important to get the students view, so they were asked to write comments in their own words on the different subjects in the questionnaire.

The questionnaire was developed using Questback, and sent via email to the respondents. The selection was the students from the last four years, a total of 404 students.

Approximately 25% replied and although this is a low percentage, it is not unusual that email surveys have a low percentage (Dillman, Phelps et al., 2009). This may be due to overload regarding web surveys (Galea and Tracy, 2007) and they may also see it as not relevant to reply to the questions (Jacobsen, 2015, Johannessen, Christoffersen et al., 2010).

A higher percentage of replies would have given a better view on the whole population, but for this study, the *results* from the survey provide important feedback on the study and the experienced learning outcome of the students. The response also display the level of importance the knowledge from the study has had regarding their work.

As an addition to the quantitative survey, two interviews were conducted in order to get a better understanding of their experienced learning outcome from the study and how this had affected their worklife. These two are chosen strategically amongst several volunteers, and both work within the same organization and both are managers. The emphasis was to choose both sexes and within the same organization. These interviews provided an in depth view of our research question of how KM strategies has contributed to their learning process and their present worklife. The interviews provided a valuable insight in what it meant for them to study and their overall learning outcome. Further, it provided a view of what learning activities that best supported their experienced learning outcome, and what the education has contributed to for their organization.

The data from interviews are “member checked” as described in Guba & Lincoln (1989) to secure validity and credibility issues.

4. Findings and discussion

This is a presentation and discussion of findings based on two different strands; the students overall experience of the study, especially concerning learning, relevance and the student active methods.

4.1 Overall experience

In the survey, most respondents reply positive regarding the study having been useful for them. Some reply that it has helped them in their work. The ways it has “helped them in their work” they report on different issues: they understand more of the work as managers, they understand more of what “is going on” at work, what mechanisms that are at work, and one respondent claim that the learning has made him or her “more secure in their work”.

4.2 Relevance

One finding is that a greater part of the respondents already working as leaders view the relevance of the study program as high for their own work practice, when compared to those not in a leader position. This also is shown in the comments that are given by the respondents to several of the questions. One example is: “Brilliant education, has contributed to my development as leader. I feel more confident about the tasks and challenges in my work”.

The table below (Table 1) show the response on the relevance the education has had towards the work practice. The majority, over 70 per cent, value the education as high or very high.

Table 1: Relevance of the education regarding your worklife working as leader

			Work as leader		Total
			yes	no	
Relevance of the education regarding your work practice	Very high	Count	21	10	31
		%	38,2%	22,7%	31,3%
	High	Count	27	13	40
		%	49,1%	29,5%	40,4%
	Middle	Count	7	15	22
		%	12,7%	34,1%	22,2%
	Low	Count	0	5	5
		%	0,0%	11,4%	5,1%
	Very Low	Count	0	1	1
		%	0,0%	2,3%	1,0%
Total		Count	55	44	99
		%	100,0%	100,0%	100,0%

During the interviews it was possible to elaborate further on this, and one of the respondents reported that the education had enabled her to understand and evaluate herself as a leader and also her seniors.

What is reported may refer to what they have been taught about Peter Senge’s fifth discipline; systems thinking (Senge, 1992). To understand the systems of what is leading to what, is a part of what is being taught.

When looking at Davenport’s definition of KM, most of the respondents seem definitively able of capturing knowledge. In total 92 percent claim they have had grate use of the study.

Regarding distributing knowledge, it varies with the number of people they have at their “disposal” and also about how they have matured the lectures.

Our interview objects certainly were able to make sense of what they had learned, as did most of the respondents from the survey. The interviewed respondents confirmed and elaborated on how they had made use of the newly gained knowledge.

The respondents that we have interviewed had different views on how they had shared their knowledge. The difference was in the number of people they had to share it with, not the willingness to share. Where they had people to share it with they did share.

They also reported on having made sense of the knowledge they have gained from the study. Statements like “I now understand what is going on in my workplace” and “it has helped me to see things more clearly” show us that they use what they have learned about organizational life and systems thinking. They also claim that they are more able to ask questions and thus have influence on the organizational decision making.

Some of the respondents from the survey also claim to use the knowledge they have gained by enabling them to organize their employees and influence on the work in the organization by for example offering what they are confident about is better leadership.

Also, the non-leaders in the survey claim to understand the organization and organizational life better and are able to use the knowledge gained from their education to understand and affect their own worklife.

During the interviews the respondents also reported that this study had changed them, not so much as private persons, but as participants in an organization. The awareness and knowledge gained made them able to affect the worklife and influence on decisions. This new self-consciousness can be seen as the change process described by Mezirow (Mezirow, 1990, Mezirow, 1991, Mezirow, 2000).

4.3 Student active methods

According to S. Gherardi (2000) in Hislop (2009) practice connects knowing with doing. The students were a subject to practice during different types of assignments and group work.

The reflection is during lectures on how this applies to their own workplace, but they are also encouraged to reflect upon theory when they are in their work situation. This “reflection in and upon practice” is described by Donald Schön (Schön, 1987, Schön, 1991).

This learning by merging of theory and practice combined with reflection is also similar to what John Dewey (Dewey, 1902, Dewey, 1938) describes regarding “learning by doing” and learning by reflecting and experiencing. The cycle of experiential learning is described by David A. Kolb (Kolb, 1984).

The respondents also seem to have gone from what Gilbert Ryle call “knowing what, to knowing how” (Ryle, 1949). To understand what is taught well enough to make use of the knowledge is what lecturers seek to communicate and make students capable of. This also implies that the students need to be able to reflect. Some of the assignments are designed to make the students reflect upon what is taught. Also to reflect in and on one’s own practice is a part of the study. Lecturers encourage students to reflect upon their own practice when lecturing about for example leadership models, organizational theory, and organizational change.

An interesting find is that although the focus have been on *organized* student active methods, the respondents from the interview claimed that as important as the *organized* student active methods (like assignments and group/team work), was the *informal* and *non-organized* groups that they refer to as having major contributed to their learning process. These non-organized groups can be compared to CoP’s as they fit the definition and “*share a concern or a passion for something they do and learn*” (Wenger-Traynor, 2016). These groups appear *ad hoc* and seem to differ from course to course within the study. This finding is in line with similar studies of leadership training programs in a Norwegian context, as well as one study in the UK of police leaders. Both school leaders and police leaders report the importance of learning in informal social settings (Hole, 2014, Hybertsen, Stensaker et al., 2014, Neyroud, 2010). However, the reports from the interviews were unanimous regarding the contribution towards the experienced learning outcome. One of the respondents claimed during the interview that “*I learned more as I could be myself, and not constrain myself as I felt I had to during the organized group work*” (cited from transcript with respondent 2).

Respondent 1 claims to seek peers that share the interest for the course and topics, so that it is possible to discuss and develop reflections. This too fits very well with the definition of CoP’s as they “share the passion” and it is about learning more.

The implication this has for further developing studies within the area of organizational management, is to have a clearer focus on creating spaces for these “peers” to meet and organize themselves in CoP’s. This should not reduce the focus on the *organized* student active methods, but more open up for allowing the students find peers that share the same interest and passion. Again it is possible to look towards how CoP’s are organized in worklife. To create and prepare for participants (here: students – in worklife: workers) to meet informally to discuss, share and reflect to support the learning process will lead to increased shared knowledge that can be utilized for the good of the organization.

5. Conclusion

The data show that the study has provided the students with experienced learning outcome. The results from the survey and interviews show that most of the respondents are able to gain, distribute and make sense and use of the knowledge obtained during the study. Some respondents claim to be more confident as leaders and that the study has provided them with tools and insight to understand and act upon different issues occurring in their worklife in their organizations.

Regarding student active methods, the respondents are varying in the use of the different types, but an interesting find is that the *non-organized groups* contributed just as much to the experienced learning outcome as the organized group work and other organized student active methods.

We also found that our students report high scores on overall satisfaction with the study program. They claim to have learned a lot and report on being able to utilize their new competencies at their workplaces. Today we see a trend towards preferring internal training programs versus external study programs, but our study clearly show the value of external study programs.

5.1 Suggestions for further research

The suggestion would be to introduce a focus on providing spaces for students to meet and form similar to CoP’s. To incorporate this focus in courses in the study, would provide data for further research. For example could different ways of preparing for this *non-organized group work* be a focus for further research.

There are also plans of increasing the number of respondents regarding interviews. This will provide a richer material and more nuances may appear.

Further research may also focus on the different ways students practice after returning to their workplaces.

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