



Distance learning students in “communities of practice”

An analysis of nursing education offered in three different learning programmes.

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Abstract

The purpose of this study was to understand the impact of the distance learning programme on learning processes in nursing education. It was the purpose to highlight the differences and similarities in the traditional nursing programme vs. the distance learning programme. Empirically, the article builds on a comparative study of two Danish nursing schools and three different nursing classes, including one based on the distance learning programme. The three different nursing classes cover the ways of studying in nursing education in Denmark. Observations were conducted with the classes as a whole. Interviews were conducted with 7 students from the distance learning programme, 6 from the traditional programme and 5 from the credit transfer class. The interpretative approach was selected to form the background of this study. The observation, as well as the interview guide was formed on the basis of Etienne Wengers theory: “Learning in communities of practice”. The analysis was based on concepts from the same theoretical background, as the observations and interviews. Findings from the study show that the distance-learning students have a selective and targeted way of engaging in communities of practice. Findings in relation to age, to being well prepared and feeling responsible for own learning, in relation to doing a self study and to knowledge forms, seem to have precise relevance for the differences between the ways of studying in nursing education.

Keywords: Distance learning, learning processes, online learning, nursing education

Background

Distance learning is applied within many study programmes today, in order to offer flexible forms of education. The increased tendency to replace traditional classroom teaching with online studies is due to the desire of educational institutions to increase recruitment, as well as to meet student demands and wishes for more flexible programmes, reduced transport time, together with a desire for easy and convenient access to information. The demand for learning interactively and asynchronously has increased over recent years, and the

demand for additional flexible and asynchronous ways of studying can be expected to grow in the coming years.

The distance learning programme is also gaining a presence in Nursing Education all over the world and since 2001 also in Denmark.

The nursing education programme in Denmark is characterised by the fact that in order to become technically competent in this field, it is necessary to acquire both academic and practical competences. Besides the academic and practical competences, in relation to nursing education, there must also be focus upon the development of personal and human qualities.

Offering nursing education as distance learning therefore involves a clear break with the traditions of face-to-face teaching in nursing education and its many associated elements of apprenticeship. The distance learning programme in nursing education has therefore put on test the nursing education's tradition of educating nurses in classrooms and demonstration laboratories. That is why the new programme has given rise to many considerations, questions and challenges in relation to the impact on learning processes in nursing education. The basis for this study has emerged from these considerations, questions and challenges and from the assumption that the change in the programme *might* lead to changes in relation to learning processes, competence development and communication.

A brief outline of the whole study

The empirical area of this study is the education of nurses, and the overriding focus is an analysis of the nursing education (*2001 uddannelsen*) offered within three different frameworks: in the traditional programme, via distance learning and as a credit transfer programme. The main emphasis is placed upon the analysis of the distance learning programme as seen in relation to the other programmes.

The research methodology encompasses observation and interview, and, as a theoretical framework and analytical perspective for the research, Etienne Wenger's theory of learning in communities of practice is applied.

The study comprises three different classes, and two different nursing schools. The three different nursing classes cover the ways of studying in nursing education in Denmark, and thereby the entire range of programmes in Danish nursing education is represented in the research. The study as a whole encompasses the theoretical as well as the clinical part of the nursing education programme, focusing on learning processes, competence development and communication.

The research questions are:

1. *How are learning processes affected by the fact that nursing students are taught and learn via the distance learning programme, rather than via the traditional learning programme?*
2. *How are the development of basic clinical nursing skills, interaction with patients, and cooperative and problem-solving competences affected by the fact that students have received their theoretical teaching via the distance learning programme, rather than via the traditional programme?*
3. *How is the development of communicative relations and competences during interaction with fellow students, teachers and patients, as well as the development of a technical language, affected by the fact that the students have received their theoretical teaching via the distance learning programme, rather than via the traditional*

programme?

The aim of the research is to be able to contribute with further illumination and clarification of the significance of the introduction of the distance learning programme for the students' learning in relation to the profession. It has thus been the aim of the research to draw attention to the particular challenges that the distance learning programme creates.

Over a time period (1st and 2nd semesters) different types of data were collected. Observation in the classrooms has encompassed the classes as a whole, and the extent was of 1-2 weeks of, on the average of 20 hours per class in the classroom. In the distance learning programme the seminars were attended for observation. Observations has been non-participating, systematized observations from the back of the classroom, from a position where it has been possible, to hear and see students and teachers.

During the observation periods, 5-7 students per class have been selected based on pre-defined criteria (for example age, previous education, occupation and other social factors). The selected students were interviewed after the observation period. And the same students were observed and interviewed in the clinical part of the programme.

The students in the study have an age distribution ranging from 20 to 51 years old, where the average age is, respectively, 32.3 for the distance learning students, 31.6 for the transfer students and 24.5 for the traditional students. The students from the distance learning programme and from the traditional programme have commenced the education in February 2005. They have been observed and interviewed through the theoretical and clinical part of the programme in the 1st and 2nd semester. The credit transfer class commenced the education in September 2004 and has been observed through the theoretical and clinical part of the programme at the beginning of the 2nd semester.

Regarding the clinical part of the study, results has been published in: *"Optimizing the learning potential for the distance learning students.- Focusing on the tension between experience and competence"* (Fredskild 2008).

Regarding the theoretical part of the study results will be discussed in this paper.

The research question that forms the background of *this* paper is:

How are learning processes affected by the fact that nursing students are taught and learn via the distance learning programme rather than via the traditional learning programme?

A description of the programmes included in the investigation

The Danish nursing education have an official duration of 3½ year full-time study, equivalent to 210 ECTS credit points. The education is a combination of theoretical teaching, equivalent to 120 ECTS points, and clinical training, equivalent to 90 ECTS points. The nursing education shall entitle the graduate to employ the title of bachelor in nursing. The English title is Bachelor Degree in Nursing (B.N.) (Undervisningsministeriet 2001).

The distance learning programme

The distance learning programme in this investigation is characterised by the entire theoretical part of the education being carried out as distance learning. The distance learning programme is covered by the same ministerial order as the traditional programme. That is to say content, textbooks, assignments, tasks, test, examinations, etc., correspond completely with the traditional education programme. As to the clinical part of the distance learning programme it corresponds completely with the traditional programme in terms of both content and scope. It is therefore only the theoretical part of the nursing education programme that is offered as distance learning.

The **Learning Management Platform (LMS)**, used in the distance learning programme, is BlackBoard. The LMS platform is applied as an aid to the dissemination of information, teaching materials, videos, and for interaction and communication in support of the learning process.

The distance learning programme is combined with face-to-face teaching in the form of seminars approximately once every four weeks, during the entire theoretical part of the education. The seminars are at the average of 3 days and approximately 20 hours pr. seminar. The combination of face – to – face seminars and distance learning could also entitle the distance learning programme to be called “*Blended learning*”, which is a programme that combines face-to-face and distance learning forms (Gynther 2007). However, the term distance learning is retained, as the term covers the fact that the students study at a distance in the main part of their education.

The part of theoretical teaching that is disseminated as distance learning, is corresponding to the traditional programme with a rate of conversion on approximately 0.3. Where the students in the traditional programme for example have scheduled 97 hours of Anatomy and Physiology, the distance learning students have only scheduled approximately 30 hours. If one looks at the part of the theoretical teaching, where the students practice clinical skills in the demonstration laboratory the distance learning students have scheduled 7 hours, and the students in the traditional programme have scheduled 27 hours. Many of the working and teaching methods from the traditional programme have been transferred to the distance learning programme, but a redesign and redefining of teaching methods on some areas has also been necessary. Redesign has for example been necessary when the students practice clinical skills in the demonstration laboratory. They practice their clinical skills as a preparation before entering the clinical part of the education. As the hours scheduled here are remarkably reduced videos has been produced, showing the clinical skills that the students shall practice. By watching the videos from the LMS platform they can make preparations and reflections prior to the lessons scheduled.

The traditional programme

Nursing education has, until the distance learning programme became a possibility, been characterised by the traditional programme where students are taught according to traditional teaching methods in nursing education. The traditional programme takes place in classrooms, demonstration laboratories and by the patient's bedside. Teaching methods and working forms in the programme have transfer value in relation to the competences that the work of nurses demands. The principles of the teaching methods and working forms are many, and they challenge the student's senses, feelings, intellect, skills, courage and creativity, at the same time as the social competences of the student are trained and strengthened with a view to successful interaction with other people.

The same LMS platform (BlackBoard) is used in the traditional programme, but in this programme it is only used to disseminate information about the study and to disseminate teaching materials, lecture lists and timetables.

Credit transfer programme

The credit transfer programme is an educational opportunity for those who are already educated as *Social and Healthcare Workers (DK-social- og sundhedsassistenter)*. The credit transfer students can via their previous education and their practical experience acquire the nursing qualifications in 2½ years. They are educated via the traditional programme. The justification for including credit transfer students in this study is first, that the study then covers all the ways of studying in nursing education in Denmark. Secondly, that the credit transfer students have an age and educational background, as well as certain social characteristics, that allow central conditions and aspects of the nursing education to be illustrated, with due regard taken to age differences, educational background, familiar obligations and former job experience. A LMS platform (Fronter) is also used in the credit transfer class, but in this programme it is, as in the traditional programme, only used to disseminate information about the study and to disseminate teaching materials, lecture lists and timetables.

Literature review

The literature on distance learning programmes in nursing education represents articles on issues related to online teaching, course development and a variety of approaches that is similar with distance education. It represents articles from the nursing education programme as well as from in-service course, and supplementary courses. In the following section, a short account is provided of some of the findings in relation to the currently published research on this field. This research account is presented focusing *only* on the distance learning programme related to nursing education, as this education is the focus of the research.

Several studies have shown student satisfaction with the distance learning programme. Something that students most frequently emphasise as an advantage is the flexibility of the programme. There is thus general agreement that one of the greatest advantages of studying under this programme is the flexibility. To be able to work at one's own tempo and in one's own environment is regarded as a positive aspect, and, furthermore, the students believe that they achieve a greater degree of responsibility for their own learning, and they learn to learn independently (Barbera 2004;Cooper, Taft, & Thelen 2004;Frith & Kee 2003;Halstead & Coudret 2000;Hyde & Murray 2005;Jonassen & Kwon 2001;Kenny 2002;Robley et al. 2004;Sit et al. 2005;Thiele 2003).

Studies have shown that the students become more independent and self-disciplined. They learn to believe in their own power of judgement, they become better at taking responsibility for their own learning and immersing themselves in their subjects more than with the traditional programme (Barbera 2004;Frith & Kee 2003;Halstead & Coudret 2000;Jonassen & Kwon 2001;Kenny 2002;Thiele 2003). Meanwhile, the greatest problem in relation to distance learning appears to be the lack of interaction and the isolation many experience under this programme (Ayer & Smith 1998;Buckley 2003;Cooper, Taft, & Thelen 2004;Hyde & Murray 2005;Reinert & Frybach 1997). With regard to the earlier mentioned tradition of face-to-face teaching in nursing education, studies show that one of the great challenges of adopting the distance learning programme is precisely that of increasing the opportunity for human interaction. Research show that there is no substitute for face-to-

face contact with teachers and fellow students (Atack 2003;Atack & Rankin 2002;Sit, Chung, Chow, & Wong 2005). It is, therefore, a challenge to establish an environment that supports being together with other students as well as develops an academic dialogue and the socialisation of the students (Atack 2003;Atack & Rankin 2002;Sit, Chung, Chow, & Wong 2005). Another challenge with this new programme is how online asynchronous communication and discussion is a big change from the traditional classroom discussion. The students express the necessity of choosing their words carefully because of the absence of human expression and body language (Chaffin & Maddux 2004).

It requires a radical change in the way we think about learning, and many teachers incorporate computer assisted learning, but continue to teach as they always have taught. Research show that it is important to be aware that computer assisted learning requires teacher training in relation to redefining and redesigning their teaching (Adams 2004;Chaffin & Maddux 2004). Researchers evaluate, that the interaction perspective is one of the main areas needing attention in relation to the distance learning programme (Atack 2003;Atack & Rankin 2002;Sit, Chung, Chow, & Wong 2005).

Another area needing attention is the quality of teaching methodologies and an increased understanding of what the change in the way of studying in nursing education means for the learning outcome (Robley, Farnsworth, Flynn, & Horne 2004).

In terms of being able to comment on the quality of that which is learned, the part of the study described in this paper focuses on learning processes in the different nursing education programmes. One can say that even though the distance learning programme in nursing education has been extensively studied in recent years, clearly missing from the literature is a comparison of the learning processes within the different nursing education programmes. This study focuses on differences and similarities between the traditional learning programme and the distance learning programme in nursing education in terms of the previously mentioned aspect. The comparative study, thereby, contributes with a supplement to the already existing knowledge in the field.

Method

Ethical issues

It is important to differ between the observations in the classes and the observations and interviews that were carried out in relation to the chosen informants.

An overall informed consent was given by the school managements', by the respective classes, and by the informants. The students were informed about the study and they had the opportunity to ask questions regarding the study. The students were told that the purpose of the study was to highlight differences and similarities in the traditional programme vs. the distance learning programme, focusing on the ways the students in the different education programs learn and develop competences.

From the beginning it was evident, that there would be some problems in keeping full anonymity, caused by the programme descriptions in the study. The problem was especially characteristic for the male students in the study. The informants were informed of this problem, and they accepted the conditions.

The knowledge gained in this study about students as well as about teachers has been treated professionally and with confidence.

Method verification

In the project, methodological triangulation is exercised. Methodological triangulation involves using more than one method and may also consist of using multiple data sources (*for example multiple informants*). Besides that, triangulation may consist of within-method and between-method strategies (Bogdan and Biklen 2007; Gilchrist and Williams 1999; Hansen 2004; Hansen 2005). The concept triangulation is widely used in qualitative research, and often used in such an imprecise way that it has become difficult to understand what is meant by it. Therefore it is of importance to describe exactly which methods were used in the research and how they were used (Bogdan and Biklen 2007). In this study, using both interview and observation implies using more than one method, and is thereby part of the triangulation. Furthermore, the methodologies observation and interview have been applied in three different contexts. Thereby the use of multiple data sources was part of the triangulation. By making comparisons, the selected students as well as the classes as a whole, were reviewed both within and between interviews and observations. This represents the aspect of within-method and between-method strategies, and is thereby also part of the triangulation.

Analysing method

Just as well as the researcher has to construct an overall research design, an analytic strategy must be developed (Crabtree and Miller 1999). In this study a combination of research methods was used, and the result was big amounts of text to be analyzed. For this purpose the researcher can use one or more organizing models or analytic strategies. One of the possible models is the template organizing model. The template organising model helps the researcher sorting out big amounts of text in themes or segments that look similar. The template organizing model is more focused than other analyzing methods because it helps the researcher to focus on specific parts in the text (Crabtree and Miller 1999; Schmidt and Dyhr 2004).

As this investigation encompasses a comparison of three different groups of students and two different nursing schools, it has been important that the analysis has been systematic and carried out in the same way for all observations and interviews (Kvale 1997). It has therefore been important, that the same theoretical framework which controlled the observations and interviews also made the structure and controlled the analysis. In relation to this study, Etienne Wengers theory about learning in communities of practice made the frame in relation to observations as well as interviews (fig.1) and the same frame was used as an analysis template.

Observation guide:	Interview guide:
<i>Theoretical knowledge & guidance Responsibility for own learning</i>	
Teacher/student roles, including working methods/ didactic design	Questions in relation to teacher/student roles, including individual understanding of learning, plus working methods
<i>Creating relationships</i>	
Communities of practice, including forms of participation, cooperation, modes of belonging, network	Questions in relation to communities of practice, including own understanding of forms of participation, cooperation, modes of belonging, network
Negotiation of meaning, including the interplay between participation and reification in relation to academic and social production of meaning.	Questions in relation to negotiation of meaning, including individual understanding of the interplay between participation and reification in relation to academic and social production of meaning
<i>Communication & developing a technical language</i>	
Application of BlackBoard, including groupings, communication, forms of application	Questions in relation to application of BlackBoard, including groupings, communication, forms of application
Communication, including forms of participation and types of communication	Questions in relation to communication, including forms of participation and types of communication
<i>Competence development</i>	
Basic nursing skills, including dealings with patients, forms of conduct in practice, work forms and methodology	Questions in relation to basic nursing skills, including dealings with patients, forms of conduct in practice, work forms and methodology
<i>Outside of category</i>	
Observations outside the categories	Questions in relation to observations outside the categories

Figure 1: Categories for observation and interview (Observation and interview guide).

One can say, that the theoretical frame, which was the background for observations- and interviews, steered the concepts and phenomenon that was looked for. The same theoretical frame made the background for the analysis, and the theoretical frame, from which the findings origin is systematically used through the entire analysis.

Findings

If one looks at some of the findings that emerged from the data, findings show that the distance learning students have a selective and targeted way of engaging in communities of practice. Findings in relation to age, to being well prepared, feeling responsible for own learning, doing a self-study and in relation to knowledge forms also seem to be of importance and to have precise relevance for the differences between the ways of studying in nursing education.

As the focus of this study is on analysing the distance learning programme in relation to the other learning programmes, findings will in the following be presented *focusing on* the distance learning programme. The findings will therefore be presented using primarily quotations from the distance learning students.

Student types and learning processes

Oblinger (2003 & 2005) claims that understanding the learners is something that can make "learning easier". Every generation of students is defined by different life experience and, therefore, the students are marked by different learning styles and by different ways of communicating. They are also, each of them, marked by different desires and needs in terms of study methods (full time, part time, flexible programme) (Oblinger 2003;Oblinger 2005).

Today's students are at different places in their lives when they commence their studies and, according to my study, there is also a wide variation in the age of the students in the different classes, which also appears to have great influence on the students' study activities.

In relation to the distance learning programme, it might have been expected that the young IT-skilled students who use computers, mobile phones, etc., every day when they communicate were the ones who applied to the distance learning programme, but this is not the case.

In the interviews, the young students, from the traditional programme say that the reason why they don't apply to the distance learning programme is because of its flexibility, as they do not believe that they have a strong enough character to work so independently. As one student from the traditional programme expresses,

"I would not be motivated enough to have the self-discipline.... and say to myself 'now you just sit yourself down, and stay seated'. I have to meet up, as then you know that you are obliged to come."(TEO,TE, 20 years)

Another student from the same programme said,

"I have never been the type that does very much homework or reads a lot or that kind of thing. I think about having self-discipline enough, they must sit and read a lot. I don't know if I could."(TCO, TE, 24 years)

The students in the distance learning programme are older students, often with another educational background, family, children, and social obligations and in need for a flexible way of studying. According to the interviews and the question why they apply to the distance learning programme, it is characteristic that they do not apply because they want to use the technology that the programme offers, in their everyday life and in their study. They apply because they seek the flexibility. With the help of Wenger's description of engaging in communities of practice, this can be further elaborated (Wenger 1998).

Wenger defines a community of practice 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 2006). According to Wenger, three characteristics, or three characteristic dimensions – mutual engagement – a joint enterprise and a shared repertoire – must be fulfilled in order to be able to call something a community of practice (Wenger 1998).

The mutual engagement is defined by Wenger in relation to an area of common interest. The mutual engagement refers to the central subject or area and the members' identification with it. Membership requires an obligation towards the area of common interest and, therefore, there must be a minimum of knowledge about and relation to the area, or a shared competence that "differentiates" members from other people. Members of a community of practice employ themselves with common activities and discussions, help each other and share information. In pursuing their interest, members engage themselves in joint activities and discussions. They build relationships that enable them to learn from each other. In the joint enterprise members interact and learn together. Unless they interact and learn together they do not form a community of practice. A joint enterprise does not mean that everybody does the same thing or agrees about everything. Wenger describes it as: "an enterprise is part of practice in the same way that rhythm is part of music" (Wenger 2006).

Interaction and learning are thus decisive in order to call something a community of practice.

Members of a community of practice develop a shared repertoire of resources. This can be experiences, stories, tools, and ways of talking about things or, put in another way, a shared practice. To develop a shared practice takes time and demands continuous interaction (Wenger 1998).

Practice is, according to Wenger, about meaning as an experience of everyday life (Wenger 1998). Meaning is located in a process that he calls negotiation of meaning. Negotiation of meaning involves the interaction of two constituent processes: participation and reification. They form a duality that is fundamental for the human experience of meaning and thus to the nature of practice (Wenger 1998).

Participation refers to the process of taking part and also to the relations with others that reflect this process. Participation is both personal and social and it reflects both a process and a relation. Participation is an active process. What characterizes participation is the possibility of mutual recognition. Participation can be connected with several forms of relations and participation in communities of practice forms our experience, but it also forms the community (Wenger 1998).

Reification means giving form to our experience by producing objects that congeal this experience into "thingness", as for example forms, points of focus, instruments, monuments, documents etc. As seen in relation to education reification can be theories, models, terms i.e.

In their interplay, participation and reification are both distinct and complementary. They are a fundamental duality. They are two dimensions that interact, they imply each other, they do not substitute for each other (Wenger 1998).

In relation to the distance learning students choosing the distance learning programme because of its flexibility one can say, that the distance learning students are members of many communities of practice in their everyday life (job, family, education etc.). The distance learning students, as mentioned previously, apply to the distance learning programme because of its flexibility. They do engage in the community of practice that the distance learning programme offers, but they are very selective in their way of engaging in the community. They have an area of common interest and the distance learning students have an obligation towards the area of common interest. But more than focusing on their need to engage themselves in joint activities and discussions, the distance learning students focus on the flexibility that the programme offers.

The following findings will show, that the distance learning students are selective and targeted in their way of choosing between participation and reification in relation to the community.

Responsibility for own learning and preparation

Studies have already shown the distance learning students do show a greater responsibility for their own learning (Barbera 2004; Frith & Kee 2003; Halstead & Coudret 2000; Jonassen & Kwon 2001; Kenny 2002; Thiele 2003). This study confirms this.

According to observations and interviews in relation to the distance learning programme, it is obvious that the distance learning students have (*almost*) always done their homework. As a distance learning student say in the interview,

”... It’s because I’m a distance learning student, so it’s pointless if I meet up and I’m not prepared, isn’t it? That’s how I see it anyway. Because it’s the least I can do, when I come so rarely, don’t you think?” (TEF, DE, 50 years)

The distance learning students are characterized by the fact that they are almost always well prepared for the lessons; they are engaged in their subjects; and they have done their assignments. With Wenger one can say that they have a mutual engagement in the programme. Their focus on the area of common interest that the community of practice offers is especially drawn towards the knowledge they have to achieve according to the curriculum. Their attention is drawn against gaining a shared repertoire of resources.

The distance learning students have to work on their curriculum and their tasks at home by themselves, and they only have a small number of lessons at the seminars where they can try to get help with the parts of the subjects they do not understand. That forces them to work with the subject matters and to take responsibility. The responsibility lies with the students, because *they* have to ask if there is something they don’t understand. This has the effect of drawing their engagement and their attention towards learning in the lessons at the seminars.

When asked the question of whether they feel responsible for their own learning, a distance learning students says,

"I am absolutely sure of that. I think more so than on the standard course. Here, we get nothing served on a plate; we have to help ourselves, just as we have to keep ourselves aware of everything else. There is no one that will do it for us, so that's my opinion for sure." (TGF, DE, 28 years).

"So you think there is greater responsibility for your own learning here than with the learning programme you were on before?"

"Of course, it was also up to us even though we came to the lessons, but, how can I put it, the teachers kept a bit more of an eye on us", (states a student who has been on the traditional programme before coming to the distance learning programme),(TGF, DE, 28 years).

Another distance learning student says,

"Yes here, yes of course.....you have to be committed; you have to find your own time to put aside each day and say that you will get as far as this and that, because if you don't do these things, well, then you won't have managed to do your homework by the next seminar", (TBF, DE, 32 years).

"...I think that it demands more of you to be a distance learner, I mean you have to be.... you must have more self-discipline to read every day...that is when you don't go to the lessons every day.....", (TBF, DE, 32 years).

The distance learning programme makes the students way of engaging in communities of practice very deliberate (Wenger 1998). On the seminars they engage themselves in joint activities and discussions. They are very focused and selective in relation to the specific knowledge, the shared repertoire they have to gain in relation to the curriculum. They are selective and targeted. The distance learning programme is a self – study between the seminars, and the students develop a special way of economizing with ways of participation and reification.

The distance learning students are very well prepared. They seem structured and "ready", when they come to the lessons. That is supported by the observation of their working method in the lessons and by interviews concerning their working method.

They are committed and they are asking questions in relation to the presentations made. They ask a lot of questions, they listen, take notes, and they want to discuss. They work very seriously with things. The lessons are of importance to them; this is their only possibility to clarify the things that they don't understand when they sit at home and read. One can say that the seminars are used to check if they are part of the community as well as it is used to check if they are up to date with the curriculum.

A distance learning student expresses it this way,

"... when I sit down for a lesson and get some information - that is to say, the way we study on the distance learning course – then I really need, how can I put it, to get a run-through of the material, I think, really concrete and precisely when you come here, because you sit and fumble around so much alone at home, don't you think? Yes, and therefore I think that a good run-through of things (read: at the seminar) and then I

have it! That is, I think it has been good teaching when I leave here and think that I understand it....” (TCF, DE, 39 years).

Distance learning as a self-study

Wherever a distance learning programme is available on the web, teachers wonder why the students aren't active in the discussion forums in the learning platforms, or on the Internet. In that connection lots of initiatives have been taken, and many of them without any success. It remains silent in those virtual discussion forums. In relation to this study, the same phenomenon has been observed.

Discussion Board (DB) is a forum in BlackBoard (BB), where the students can discuss (among themselves and/or with the teachers), where they can deliver their answers to subject exercises and where they can get help to find the answers to different subject exercises. However, there is not much activity here, and the teachers wonder why the students aren't more active concerning questions and exercises, and concerning contributions to discussions in DB.

During the observation period, the distance learning students several times expresses their desire to avoid using DB. The students express that they want to read and immerse themselves in their subjects, but they won't use their time to read, relate to and discuss what fellow students have written. They state, that they choose not to use DB because the distance learning programme is an independent or private way of studying, and they will decide for themselves on what and when to use their time. They say that there is a clear potential for using too much time on discussions in DB instead of time on immersing themselves in their subjects.

As Wenger states, members of a community of practice employ themselves with common interest and discussions, help each other and share information. The distance learning students however are selective and targeted in their way of joining the communities of practice. They will employ themselves with common interests and discussions when they attend the seminars, but in between the seminars they don't engage themselves in joint activities and discussions.

In relation to the statements in the interviews about not using DB and BB, an explanation to the lack of activity is because it takes too long before the answer arrives. A distance learning student says,

”...Because it doesn't give me the same (read: to get an answer via DB), and also because so many days go by before you get an answer. I can't be bothered to sit and wait...” (TEF, DE, 50 years).

“What do you do then if you're sitting with a question at home which you can't figure out? Well, then I look for another book.”

“And the reason for not asking the question in BB, what's that?” “Well, it is that I think it takes too long before I get an answer” (TEF, DE, 50 years).

The distance learning student only ask questions via BB, if there is absolutely no other possibility, and that's why they give the impression they are inactive, and why there is silence in DB and BB. They explore a lot of other opportunities before asking the teacher. This is confirmed by the interviews, but also by the observations at the seminars. At the seminars, they seem very active in asking questions in relation to clarifying their homework and their assignments. Questions they couldn't manage to find answers to or understand

by themselves. One can say that they need the seminars to check their understanding, their knowledge and to check if they are up to date according to the curriculum.

There are more than one explanation why the teachers think they are inactive on DB and BB. One explanation is that the students think it takes too long before they get an answer; another is that they want to find the answers by themselves and not just get it from a teacher.

In the interviews, the students express that they only ask questions via BB if absolutely necessary. It is only if they can't find the answers, by themselves, that they ask questions through BB. The students express in the interviews that they really try many other ways to find the answers to their questions, before they ask the teacher. They also say that it is not good enough for them to get the answer to the question, they also want to know where and how they find the answer. The distance learning student say,

"I try to find the information myself, as far as possible".(TEF,DE, 50 years)

"I think I would make a bigger effort to figure it out on my own at first, the first time in any case, and if I really couldn't figure it out, then I'd ask about ." (TGF, DE, 28 years)

"Yes, but it gives me greater satisfaction to figure it out myself", (TGF, DE, 28 years)

"No, then I would find another way to learn it, another reference, book or..." (TDF,DE, 22 years).

They want to find the answers themselves, or as a distance learning student expressed it in the interview,

"...because I don't learn anything through people telling me the answer, that is I only learn if I do it myself (read: find the answer).....or you end up still sitting with the question: well how did he work that out?..... and I don't really think there is anything constructive in that....just to give the answer to the questions." (TFF, DE, 29 years).

Knowledge and forms of knowledge

Knowledge is not only knowledge, but also a much more differentiated and complex dimension. According to Scharmer (2001, 2007), the different knowledge forms is described as explicit, tacit and self – transcending knowledge. Described in a more simple way, knowledge can also be described as the following four kinds of knowledge: know-why; know-what; know-who; and know-how. And the point is that all four of these must play together to gain optimal learning conditions.

"Know-why" is a theoretical form of knowledge, which makes us able to argue, make decisions and draw conclusions. "Know-what" is formalized knowledge, which focuses on objective theoretical knowledge. "Know-who" focuses on understanding other people and on the values we have in communities. It is practical knowledge, which, in technical terms often stands for "silent knowledge", and the term contains a common social understanding. Finally, "know-how" is described as "learning-by-doing", and the term has a practically oriented slant, just as "know-who" has. "Know-how" is gained through practice

(Hemmingsen 2000; Scharmer 2001; Scharmer 2001; Scharmer 2007;Thomsen 2001).

According to the observations and interviews in this study, one more form of knowledge can be added to the above four. This knowledge form is also necessary for learning to take place, and is called "know-where". The distance-learning student's express that objective theoretical knowledge, "know-what", which they can read by themselves, ask questions about and get answers in relation to, isn't enough. They also want to know why it is like that ("know-why"), so that they can reason about it, extract and draw conclusions, and they want to know where to find the answers ("know-where").

The distance learning students, as mentioned earlier, not only want to get the answers to their questions, but they want the possibilities and help to find the answers by themselves. They want to know more than the answers; they want to be able to find out, how to find the answers. They want to do this by themselves, and they want to find the information they need for this, also by themselves e.g. by seeking new or other literature.

In relation to the research question on how the learning processes is affected by the fact that nursing students learn via the distance learning programme one answer is that the distance learning programme attracts another type of students than the traditional programme does. As stated earlier there is a wide variation in the age of the students in the different classes, which also appears to have great influence on the students' study activities.

The distance learning programme, which is also concluded in a number of other studies, increases student independence and responsibility. The distance learning students learn to take responsibility and to seek knowledge. This study show, as Oblinger also stated (2005), that beyond the four knowledge forms (know what, know-why, know-who og know-how), one more can be added, in relation to the distance learning programme. It is the knowledge form "know-where", that is necessary in relation to learning under this programme (Oblinger 2005). The fact, that the distance learning students are on their own in between the seminars forces them to seek knowledge on their own. They need to know where to find answers to their questions and they need to be able to do it on their own because they only attend the seminars every fourth week.

Conclusion

The distance learning programme forces the students to meet up for their seminars well prepared, so that the seminars can be used constructively to get the answers to the elements and questions that they cannot understand or manage to find answers to on their own. They need the seminars to check their understanding, and their knowledge. In relation to the interaction perspective mentioned in the review, the distance learning students are very selective and targeted when they attend the seminars. It seems that they do not primarily attend the seminars because of the interaction perspective but because of the knowledge perspective. Their purpose on the seminars is clearly to get answers to the problems that they didn't manage to solve on their own.

The fact that the distance learning students are members of multiple communities of practice (job, family etc.) do, that they selective and targeted choose when to work alone and when to cooperate in communities of practice in the programme (Wenger 1998).

They seem structured and ready when they attend the seminars. With Wenger one can say, that the distance learning programme makes their way of

engaging in communities of practice very deliberate (Wenger 1998). They have to be selective and targeted.

The distance learning programme becomes a self – study between the seminars, and the students develop a special way of economizing with ways of participation – and reification.

One can say that the distance learning student's selective and targeted way of engaging in communities of practice can be of importance in relation to the nursing profession. It is an area that needs attention as they, when they engage the profession, as educated nurses, cannot keep up the selective and targeted way of engaging in communities of practice. As a professional nurse they have to join many communities of practice, and to engage in joint activities and discussions both interdisciplinary and in relation to the nursing profession.

The programme is of importance for the students' ability to plan and structure their study. The distance learning programme sets the scene for the students to take responsibility for their own learning and for them to seek knowledge by themselves. The distance-learning students become independent students, and the study becomes an independent study in between the seminars. In relation to the interaction perspective, only the seminars force them to interact and this they, as mentioned, do very targeted and selective. The interaction in the communities of practice does not reach beyond the seminars (Wenger 1998).

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