Optimizing the learning potential for the distance learning students

Focusing on the tension between experience and competence.
An analysis of nursing education offered in three different learning programmes.
The focus is on analysing the distance learning programme in relation to the other learning programmes.

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Abstract

The distance learning programme has made its entrance into nursing education, and many see it as a break with the education's traditions of teaching in the classroom, in practise rooms and at the patient's bedside (Chaffin & Maddux 2004)(5).

Traditionally, many of the technical skills and personal qualities that nurses must acquire are learned through interaction with others. The distance learning programme has therefore given rise to some new problems and challenges, and this article discusses some of these.

Empirically, the article builds on a comparative study of three student nurse classes from two Danish nursing schools, including one based on the distance learning programme. By following both distance learning and traditional nursing students in their clinical training, light is cast upon the differences and similarities that may exist in the clinical skills and competences that the students gain under the two programmes.

Theoretically the article builds on Etienne Wengers theory on learning in communities of practice, focusing on the relationship between experience and competence in learning related communities of practice (Wenger 1998; Wenger 2004)(36)(37).

The article contributes with findings that are related to the differences between the programmes and the different types of students that each programme attracts. The article argues that an increased didactic and pedagogical focus upon the field of tension between experience and competence will enable an optimisation of the learning conditions of the distance learning students in their clinical teaching. The article, in conclusion, thus places focus on the questions surrounding teaching design in relation to the distance learning programme.

Keywords: distance learning, nursing education, learning processes, nursing skills and competences, communication

Introduction

When nursing education in the form of distance learning was introduced in Denmark, it raised many questions from nurses concerning both the clinical and the theoretical parts of the education. The reactions to the fact that a clinical, professionally oriented education, which nursing education in fact is, was offered as distance learning were many and sceptical. Some of the questions that arose in connection with the fact that the distance learning programme became a reality were ones such as: Can you study nursing from home? Do you become skilled enough to function as a nurse? Do the students learn enough? Can the students remain in touch with reality? *And*, what about the conditions for patient care in an ever more technologically based healthcare system, and now in an ever more technologically based education system? (Sievert, Larsen & Frederiksen 2003)(29).

Nurses' understanding of nursing as a profession that demands personal and humane qualities, which traditionally have been developed in dealings with other people, resulted in a certain scepticism of the distance learning programme in nursing circles. Many saw the change of programme as a clear break with strong traditions in both profession and education, and, along with the new programme, a long tradition of educating nurses in classrooms, practise rooms and in clinical training has been put on test.

This research project was initiated in order to penetrate deeper into the range of questions and problems that the new programme raised, and from the assumption that the change in the programme *might* lead to changes in the competences and qualifications developed by the students. The research questions that forms the background of this paper is:

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?

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 study involves comparative research of the programmes with focus on whether students of, respectively, the distance learning and the traditional programme can achieve the same skills and competences.

The aim of the study is to contribute with an illumination and a clarification of the influence of the distance learning programme on student learning in nursing education. And it is the purpose to draw attention to the special challenges that the distance learning programme creates.

In spite of the fact that there is, today, a discussion taking place about e-learning within education generally, the following literature review will alone encompass the distance learning programme in relation to nursing education, as this education is the focus of the research.

Literature review

Research show advantages and disadvantages, strengths and weaknesses with both distance learning and traditional programmes (Gomory 2001; Shovein et al. 2005)(11)(28). One of the advantages of the distance learning programme is that the recruitment of students can be increased (Kyrkjeby & Hanestad 2002)(19), and it opens the possibility for students who would otherwise not be able to take the education to now get the possibility to do so (Simpson 2003)(31). This does, however, mean that it is no longer possible to be sure that the "same age group", let alone the same generation and experience, is represented in the education, as the distance learning programme with its flexibility opens the possibility for a wider field of applicants (Gomory 2001; Oblinger 2003; Oblinger 2005; Shovein, Huston, Fox & Damazo 2005)(11)(23)(24)(28).

In the same time, research show, that every generation of students is defined by different life experience. Therefore the students are marked by different learning styles and by different ways of communicating. For example there is research that show, that beyond the four knowledge forms (know what, know-why, know-who and 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 2003)(23). The knowledge form "know-where" is necessary in order to help the distance learning student's to be independent and take responsibility for own learning (Oblinger 2003)(23). Research also show, that the distance learning students are, each of them, marked by different desires and needs in terms of study methods (full time, part time, flexible programme) (Oblinger 2003; Oblinger 2005)(23)(24).

Researchers have also focused on the fact that the competences a student shall acquire through the education are competences that must be constantly developed in order to keep pace with the technological development within the health service, not just during the study period but also as a post graduate. Therefore, it is necessary in terms of the education to place increased focus on new learning methods, flexible teaching forms, computer assisted learning (CAL) and technology in education (Bonnel, Wambach & Connors 2005; Cooper, Taft & Thelen 2004; Halstead & Coudret 2000; Kenny 2002; McCannon 2003)(4)(6)(13)(16)(22).

On the other hand, as a disadvantage with the programme, it can especially be noted that physical presence in the classroom with the possibilities that entails for providing teaching and learning with the "human touch" are removed (Shovein et al. 2005)(28). Many believe that this is problematical, particular in relation to the fact, that the nursing profession demands personal and humane qualities, which traditionally have been developed in dealings with other people (Simpson 2003; Sitzman & Leners 2006)(31)(33).

Researchers therefore evaluate, that one of the main areas needing attention is the interaction perspective in relation to the distance learning programme (Atack 2003; Atack & Rankin 2002; Sit et al. 2005)(1)(2)(32). Another area needing attention is a further clarification, and an increased understanding of what the change in the way of studying in nursing education means for that which is learned (Robley et al. 2004)(25).

The above selected review raises questions about whether the students via the distance learning programme, can achieve the same level of knowledge, the same clinical skills and competences as the students under the traditional programme? In terms of being able to comment on the quality of that which is learned, this study focuses on competence development and communication in the different nursing education programmes. There is a lack of research focusing on the clinical part of the distance learning programme. 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 programmes, focusing on the clinical part in the different nursing education programmes.

The study

The participants in the study have been nursing students under the distance learning programme, the traditional programme, as well as credit transfer students. In order to emphasize differences and similarities between the programmes, they will be briefly described as follows.

The programmes

The nursing education is prescribed as 210 ECTS points. The education is a combination of theoretical teaching, equivalent to 120 ECTS points, and clinical training, equivalent to 90 ECTS points (Undervisningsministeriet 2001)(35).

The distance learning course is characterised by the entire theoretical part of the education taking place as distance learning. The distance learning programme is combined with seminars approximately every 4th week. Therefore, one could also choose to call the programme Blended Learning (Gynther 2007)(12), i.e. a programme that combines distance learning with face-to-face seminars. However, the term distance learning is retained, as the term covers that which is practiced in the greater portion of the theoretical part of the study. The clinical part of the programme corresponds completely to the traditional programme in terms of content and scope, but the number of lessons in the practise/demonstration rooms, where basic clinical skills are practised prior to the clinical training, is significantly reduced.

The traditional programme takes place in classrooms, in practise/demonstration rooms and at the patient's bedside. A variation of teaching methods and forms of working are employed, which have a transfer value in relation to the competences that employment as a nurse requires. The principles in the teaching methods and working forms are many, and in their entirety they challenge the student's senses, emotions, intellect, skills, courage and creativity, as well as strengthening the student's social competences with a view to interacting with other people.

Under the credit transfer programme, the students also study in the traditional way. Here, the difference to the other programmes is that the credit transfer students have previously been educated as *Social and Healthcare Workers (DK-social- og sundhedsassistenter)*. They are given merit for parts of their previous education and can, therefore, complete the

education after 2½ years. The justification for including credit transfer students in this study is firstly, 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.

Design

The study is based on two separate nursing schools and 3 different classes, and encompasses both the theoretical and the clinical part of the education. The data collection method is observation and interview. The interviews are a supplement to the observations, primarily to elaborate and put into perspective observations concerning differences in the teaching related conditions.

As a basis for the observation in the clinical part of the education, student appearance or behaviour in practice was of central significance. The competences that need to be developed during the students' 1st and 2nd semesters concern basic nursing skills, dealing with patients, communication, as well as problem solving and cooperating skills. The observations were carried out with a view to clarifying whether the students had achieved the same competence level in relation to the aim that is described in the curriculum, regardless of which nursing programme they were educated under.

The part of the study that is relevant in this article consisted of 15 students. Each student was observed over two days, i.e. a total of 30 days of clinical training. The first day was placed at the commencement of the clinical training and the second day later in the course, with the intention of being able to observe whether there were immediate differences in their appearance or behaviour in practice dependent upon the programme when they came *directly* from the theoretical teaching, and after an "introductory period" in the clinical training. As discussed in the section concerning findings, differences did indeed become apparent.

Participants

The students from the distance learning study programme and from the traditional programme have commenced the education in February 2005. They have been followed at the beginning of the 2nd semester in their clinical training. The credit transfer class has commenced the education in September 2004, and they have also been followed in their clinical training in the beginning of the 2nd semester.

Altogether, 15 students were observed / interviewed in the clinical part of the education (including 4 from the distance learning study programme, 5 from the transfer programme and 6 from the traditional programme). The students have an age distribution ranging from 20 to 51 years old, where the average age is, respectively, 34.5 for the distance learning students, 31.6 for the transfer students and 24.5 for the traditional students. The age of the students shows itself to be significant for the findings. Well knowing that there were also few older students in the traditional programme, the following comparison will nevertheless

primarily focus on distance learning students versus students who are physically present, as this comparison is the focus of the research. The age difference will thus be reflected in relation to the different student types that are connected to the programmes. Furthermore, it must be made clear that only one out of two "older" students under the traditional programme displayed the same tendencies as the distance learning students.

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 & Biklen 2007; Gilchrist & Williams 1999; Hansen 2005)(3)(10)(14). 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 & Biklen 2007)(3). 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 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.

The main theoretical framework *(Etienne Wenger: Communities of practice. Learning, meaning and identity)* has provided an overall framework with a view to categorising both the observation guide and the interview guide (Hansen 2005)(14). Thus, the questions that have been posed at the interviews, in accordance with the interview guide, have had the same basis and reference framework as the observation guide, see table 1. In this way, the oral statements from the interviewees have been applied to clarify and put into perspective the observed (Frankel 1999; Mays & Pope 1996; Silvermann 2005)(9)(21)(30).

In the concrete investigation, the advantage of applying the comparative methodology is that it is possible to gain an insight into how the different education programmes unfold in their natural context. Furthermore, the investigation can provide insight into, and knowledge about what influence the choice of programme has on the central areas of investigation.

It is primarily the research questions that have determined the methodology in such a way that consistency is achieved between research questions, reference framework, scientific and theoretical reflection, data collection strategy and analysis. The above elements have contributed to giving the investigation a high degree of transparency. As the investigation is a comparison of different groups, the analysis is tackled systematically and carried out in the same way for all observations and interviews (Kvale 1997)(18).

Analysis

Template organizing method

Just as well as the researcher has to construct an overall research design, an analytic strategy must be developed (Crabtree & Miller 1999)(7). In this study a combination of research methods was used, and the result was big amounts of text to be analyzed. For this purpose one can use the template organizing model. The template organizing model helps the researcher to identify bits of text, to use for further analysis, and in this case the template was made on the basis of the same theoretical frame as the observation – an interview guide (Crabtree & Miller 1999)(7). 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 & Miller 1999; Schmidt & Dyhr 2004)(7)(27).

The template organising model has in this study been used to sort out big amounts of text in findings or segments that look similar. The method is theory guided in that manner, that the central concepts of the template have been used to identify text bits from the observations and quotations from the interviews.

It has been important, that the same theoretical framework which controlled the observations and interviews also made the structure and controlled the analysis.

One can say, that the theoretical frame, which was the background for observations- and interviews, steered the concepts and phenomenon, which was looked for. The same theoretical frame has been the background for the analysis, and this theoretical frame, from which the findings origin is systematically used through the entire analysis (Crabtree & Miller 1999)(7).

Methodology discussion

The justification for selecting observation and interview as methods is that these methods can support each other. Observation is a suitable method for achieving direct and first-hand access to the field, as well as for strengthening the understanding of the environment, from which it is subsequently possible to carry out the interviews (Malterud 2003)(20). Observation and interviews in combination are, therefore, not only employed in order to obtain a more "complete picture" of the research subject, but also out of a belief that the methods can support each other. The oral responses from the interviewees have thus been employed to elaborate and put into perspective the observed aspects (Frankel 1999; Mays & Pope 1996; Silvermann 2005)(9)(21)(30).

The departments (in hospitals and by the district nurses) which the students were attached to in the observation period were just as varied in character as generally in the education. The difference that can be found here is thus not decisive in relation to the programmes, but reflects differences that are found in the clinical part of the education generally throughout the study programmes.

Qualitative research, particularly within health scientific research, is often criticised for a lack of scientific stringency (Mays & Pope 1996)(21). The most usual criticism of qualitative research is focused on the lack of reproducibility, biased by the researchers' personal and subjective impressions, as well as validity, reliability and generalisation problems (Mays & Pope 1996)(21). There is no consensus surrounding these concepts within qualitative research (Hansen 2005; Kvale 1995; Kvale 1997)(14)(17)(18). In relation to this, it is important to draw attention to the fact that this research project is of such a character that the subject being researched *cannot* be researched with the help of quantitative research methods. The research is constructed as described above, because observation and interview are the most suitable methods with a view to obtaining a clear picture of the selected problems. Therefore, it must be noted that the above criticism of the lack of reproducibility, biased by the researchers' personal and subjective impressions, as well as validity, reliability and generalisation problems are a condition of operation in relation to research of this character.

Findings

The findings concerning experience and competence, creating relationships and communication, guidance and theoretical knowledge, as well as responsibility for own learning, are findings which immediately arose from the analysis phase. It is precisely within these findings that some of the central differences between the programmes are marked, and these findings will be elaborated below with representative observations and student quotations, as well as be discussed and put into perspective in relation to Etienne Wengers theory of learning in communities of practice (Wenger 1998; Wenger 2004)(36) (37).

Experience and competence

One of the important observations in the clinical training period was that the distance learning students arrived well prepared and had a plan. They knew from the first day what they should do in their clinical training, and they had prepared themselves. That is not to say that the students from the traditional programme showed none of these qualities, but the distance learning students made an impression. They had answers to many questions and posed questions in relation to the period, which documented their thorough pre-reading of the material concerning the practical period, and that they had considered what the practical period consisted of.

The distance learning students have, from the theoretical part of the education, been used to independently planning their daily life and study programme very carefully. They have apparently taken this habit of planning and preparing themselves along to the clinic. They have thus, via the theoretical part of the education, learned that in order to be able to administrate the study programme as a whole as a distance learning student, it is necessary to plan and prepare oneself, and this also characterises their approach to the clinic. In the theoretical part of the programme, they were thus also very well prepared when they attended the seminars. The justification for this was that they should get the most out of the seminars, as they had so little time at the school.

The distance learning students are, right from the beginning of the clinical training, good at joining in and at independently finding something to do, so they do not merely walk around on the heels of a supervisor waiting to be told what to do. The distance learning students showed themselves generally to be good at asking if there was anything they were in doubt about. In contrast, some of the students under the traditional programme do not ask very much, but adopt a very listening and wait-and-see approach at the beginning of their clinical teaching period. Other students under the traditional programme are good at asking the supervisor about things they are in doubt about, but are hesitant to have a go themselves.

The observations generally show that there is, on the face of it, more "drive" in the distance learning students. They seem under the observations to be more practical with regard to the work that needs to be done, and with regard to using their own initiative to see what needs to be done, etc.

If this is considered in relation to age and maturity, which are some of the aspects that characterise the difference between the student types of the programmes, then experience is something which characterises the distance learning students' behaviour patterns.

Many of the distance learning students have some experience of previous post-school education, employment or other practice. There is, therefore, here a case of a generation difference, which has its background in the fact that the distance learning students are used to having to ensure that a family, a working life, etc, run smoothly. It becomes apparent that the purely daily routine practical tasks centred on the patient – making the bed, serving breakfast, brushing teeth, etc., – come naturally to the distance learning students. These are things which they have previous experience of, from either a private or employment context. Meanwhile, the distance learning students often experience that, when they, for instance, are carrying out the purely practical tasks around the patients, their personal competences are not always adequate. The gap that exists between their personal competences and the professional competence they need results in them going through some barrier-breaking experiences. These experiences make them feel that they have a need for professional support to develop a professional repertoire, e.g. when they need to help a patient with eating, getting washed, etc.

An example of this,

"…. It was because it was a real person, and you don't know that person, and you don't know if he is in pain there or how it feels when I do that? You don't know them, it's complete strangers you are touching, you have no idea of how he reacts when you do it....and so Ruth, then she comes with the suggestion that you can, of course, wash one side of him first, and then just get him to turn onto one side, and that makes it much easier and much more comfortable for him, you know.....it was one of those situations where I thought that was really smart...and that is more considerate for him and easier for me…"

The above example illustrates how a field of tension can arise between a personal or private competence and the need for the development of a professional competence. The experience of this interaction or field of tension between a personal competence and the need to develop a professional competence optimises, in an ideal sense, the learning potential and is, thereby, decisive for the distance learning students' learning processes

during their clinical training. With the help of Wenger's description of the field of tension between competence and experience as a trigger for the motivation for learning, this can be further elaborated (Wenger 1998; Wenger 2004)(36)(37).

Wenger writes that the tension-filled two-way interaction between competence and experience is a decisive motivation if learning is to occur. Learning can be characterised as a change in the adjustment between experience and competence, and this applies, according to Wenger, regardless of whether one or the other component in the moment of learning is the decisive factor in the adjustment (Wenger 1998; Wenger 2004)(36)(37). Another point is that when the distance between new competence and experience becomes either too great or too small, then learning is weakened, while learning as a barrier-breaking process can take place when the right tension between experience and competence exists (Wenger 1998; Wenger 2004)(36)(37).

The distance learning students actively apply their everyday or personal caring competences as a basis for their efforts to achieve the professional care competence which, during their practical period, they have experienced could be beneficial. It can be said that the personal competences the distance learning students come with are motivating in terms of learning.

The student's experience, that they must adapt or transform their personal competences to the professional competence system of the setting, which optimises the learning possibilities. Here thus occurs a transformation of the personal care competence towards a more professional care competence, and from that perspective it can be said that the professional competence system steers their experiences and the further qualification of these.

Considering students under the traditional programme, then many of them, also in the later interview, express that they seek temporary work alongside the clinical training because they feel that they are "inexperienced" and, therefore, need experience in relation to the competences they must acquire.

The following quotation describes this,

"....Yes, I can certainly feel the difference from when I started in Tinglev, where it was the first time I should try; but now I have also worked as a temp at the nursing home in the summer holiday. That has also helped. You have more...not routine, but it has become something you have more of a feeling for...."

The students under the traditional programme have thus a need to work up some experiences or personal competences, so that they more quickly, via participation and the creation of experience, i.e. practice-learning, can become adapted to the competence system of the setting.

At the second observation, after a period of clinical training, it is clear that also the students under the traditional programme are working more independently than at the first observation. They have in the intervening period worked up some routines and competences that, on the face of it, make them more sympathetic and, thereby, provide them with a better sense of, or feeling for what they need to learn. At the second observation, the difference between the distance learning students and the students under

the traditional programme is thus not so clear anymore in terms of the practical work, in the form of making beds, serving breakfast, brushing teeth and doing things on your own initiative.

The observations thus show that there is a difference in their appearance or behaviour in practice dependent on the programme when they arrive directly from the theoretical part of the study programme. Where you might have expected that the distance learning students, due to the reduction in nursing practise lessons in the theoretical part of the education, have had difficulties in getting on, it in fact becomes apparent that they differentiate themselves from the traditional students on precisely this point by bringing their personal competences into practical application. It was the traditional nursing students, as discussed, who were more cautious. The differences meanwhile equalised eventually during the clinical training as the students, via practice, develop a more professional care competence.

Creating relationships and communication

Another important and relevant theme that emerged under the observations was that the distance learning students are good at creating relationships and at communicating with the supervisor and patients/clients. The students themselves believe this is because of their age, employment experience and/or educational background, and that they are used to communicating with others in relation to both education and employment.

In this connection, it can, among other things, be noted that the transfer students were assigned to specialist departments (in hospitals and by the district nurses) because they were already trained in basic clinical skills in their previous education. Here it became apparent that the ability to create a relationship to others, and the ability to communicate were things they carried over from their previous education and work experience.

Some of the above comments are also applicable to the distance learning students. They are straight away good at talking with others and at creating a relationship. It might have been expected that their programme would have prevented them from training their communication skills and isolated them, causing them to have difficulty in communicating and in creating relationships. In fact, it was noted how they differentiated themselves from the traditional students concerning this point.

The distance learning students all expressed that it was no problem for them to create a relationship with the patient and to talk with them,

”......I think it would be difficult, or obviously I can't judge it, but it's difficult if you're younger; …. then I think that it could be a problem, but most of us have been out to work and have of course had to communicate in all sorts of strange ways, tried a bit of everything before we decided on this here, so I think if you have that life experience, which you can call it, then....”

”Yes, I haven't had such big problems, but I am of course easy going; now I'm used to jumping headlong into new situations and adapting in one way or another, you know? So I don't have any difficulties with that, nor is it hard to talk with other people......Well, I ask questions of course, and I try to talk with them about their everyday lives as well, and talk about other things than just that, you know? ...”

Many of the students under the traditional programme were, in contrast, insecure about how to communicate with others in such situations, while the distance learning students just communicated in an everyday or ordinary way.

Several of the students from the traditional programme said in the interviews that they felt it was difficult to communicate with the patients at the beginning of the practical period. Several of them expressed that in order to alleviate this, they found themselves a role model, or they imitated the nurses. A traditional student expressed it thus,

"You just need to get into it, and think about what to say, and see how those educated nurses do it, and then I try to copy them, that is the way they speak to the patients, and then try to talk with them in the same way".

Several of the students from the traditional programme expressed in a similar way that their knowledge of the nursing sector (e.g. via a summer holiday job, or similar) meant that they learned to communicate gradually, as they gained some experience with it,

"................, it is also because I have been out with the District Nurses that I have learned how to chat a bit about the weather and things....."

"... I am happy that I had started in my job, where I come out and meet the old people, because it is primarily older people that are up here. It has meant that I find it easier to make an approach now and chat with older people, something I haven't been used to before; there are of course many who have some experience.....Yes, it has helped me a lot because I think one thing is how I talk to my grandparents, but it is of course different in relation to other people..."

In this case, it is thus again the interaction between competence and experience that in the moment of learning is the decisive factor (Wenger 1998; Wenger 2004)(36)(37). Here, it is a case of barrier-breaking in the form of communicating with real patients and real nurses, rather than, for instance, family members. The distance between the students' personal competences and the professional competence creates a field of tension, in which the learning potential can be strengthened or weakened (Wenger 1998; Wenger 2004)(36)(37).

Developing a technical language

Based on the above quotations, it can be seen that, for the distance learning students, to create a relationship through communication is a natural thing, whereas for the students under the traditional programme it is barrier-breaking. The experiences the students gain when they communicate with, say, the patients, can from a theoretical learning perspective "trigger" the field of tension and thereby create learning. Therefore, it is probable that the greatest learning in this case actually occurs for the students under the traditional programme, as they clearly experience the greatest need for learning. As can be seen in the above quotations, the distance learning students find it natural to communicate, and they experience, therefore, no need for breaking new barriers in connection with applying their personal competence. It can thus be said that for the distance learning students, concerning this aspect, the field of tension between personal and professional competence does not arise to the same degree, and, therefore, learning is not motivated to the same degree as for the students under the traditional teaching form (Wenger 1998; Wenger 2004)(36)(37). If they, therefore, do not get their everyday language challenged by a

professional, they are on the face of it in danger of not developing a professional technical language. Unless supervisors pay attention to observing and correcting, in relation to ensuring that the communication is developed, not just in an everyday sense, but to a professional technical communication competence, there is a danger that the distance learning students will retain their everyday style, or personal communication competence.

If the above is compared to the findings from observations and interviews in the theoretical part of the education, where it emerges that the distance learning students primarily get their technical language trained at the seminars, then it is important to underline that focus in the planning of the programme is exactly directed towards this area. It can be said that, provided the supervisory nurses are not aware of the basis for the distance learning students' form of communication, there is a danger that the students do not get their personal communication competence adjusted to the competence system of the institution, such as actually occurred in relation to the practical tasks. In that way, a possibility is created for the learning of practical nursing skills, but not learning possibilities for the development of a professional communication competence, let alone a technical language in relation to this.

In relation to the previous comments that one could perhaps expect that the programme had prevented the students from training their communication and in that way isolated them, it actually emerged in the research that they were not affected by difficulties in communicating, but rather were affected by the fact that they were not trained in professional technical communication. The observations thus show that there are differences in the students' way of communicating when they come directly from the theoretical part of the study. In contrast to what might immediately seem reasonable, it is the distance learning students that, on the basis of their practical experiences, appear to be best at creating relationships and at communicating, while the students from the traditional study programme are more uncertain and cautious, and have a need for role models and guidance. For the distance learning students, tension between personal and professional communication competence does not occur to the same degree, which is why learning in this area is not as motivated as for the students under the traditional programme. This difference is of significance for the development of a professional technical language under the distance learning programme.

Guidance and theoretical knowledge

Another important theme that showed itself under the observations and which is connected with the above problem was that the distance learning students were characterised as thinking a lot and in a very abstract way in relation to what they had learned in the theory and read in the books. They thus compared their observations and dealings with patients with what they had read in the theory. For instance, it emerged that one of the distance learning students had printed out parts of the hygiene manual, which she carried around with her during the clinical training. She had done this in order to be sure not to contravene the hygiene regulations. She used it as tool for reflection or instruction when she had to actually carry out something, *"[I] look at/think of this print-out I have made from in there, to see how is it you do this or that...."*

She used, therefore, print-outs, in this case parts of the hygiene manual, in order to reflect over how you do things correctly. In the areas where she couldn't get support from the hygiene manual, she tells that, *"That's when I think about it in a logical sense"*.

It is here, therefore, clear that this student, in relation to the carrying out of concrete nursing skills, has a need for theoretical knowledge and theoretical reasons as a basis for her actions, which of course is something that always applies to a professions education.

Professions students must in a professional way be able to combine "what" and "why", with "how" and "who" (Flyvbjerg 1993; Hemmingsen 2000; Scharmer 2001; Thomsen 2001)(8) (15)(26)(34).

Observations and interviews show, meanwhile, that the distance learning students are dependent upon the theory and the theoretical reasons in ways which they cannot combine with their practical experiences in the same flexible way as the students under the traditional programme and the transfer students. The distance between theory and practice is too great for it to be able to trigger learning and be harmonised in a flexible professional repertoire. The following quotations illustrate this theme,

"So we asked her what she was going to be operated for, and it wasn't the same as was written on the form. Here there was a spanner in the works, not just that it wasn't signed, because ethically it's not right that they should lie down and sign when they have had their premedication, you know?....And then she also comes in (to the operation room), but the anaesthetic is struggling to anaesthetize her, and of course because things are a bit stressed out there, you know, …………., but its a good thing with all that checking"

".......and you can see others where you don't really feel that they're communicating with the patients in a good way, ...and now and then I've experienced some who just say, "Oh, these pains, they're quite normal". And it's very strange when you've just read some theory that says you should take every single patient's pain experience seriously. That doesn't exactly match the situation in such a department……...."

It frustrates them to see and experience something that does not correspond with that they have read in the books or learned in theory. The practical experiences they gain are not consistent with the theoretical competence they have achieved. It can be said that the professional "know what" and "know why", which they have acquired in the theoretical part of the education, is not in harmony with the practical "know how" in the department. This problem of finding an interplay between theory and practice can, as noted previously with Wenger's concepts, be described as a field of tension, which has a consequence for the possible learning. And here, the distance or tension for the distance learning students is too great to allow them to achieve the desired learning.

The distance learning students are not socialised in the classroom, via learning in the communities of practice which, according to Wenger, contain both the more implicit, informal or tacit knowledge, as well as the explicit theoretical knowledge. The distance learning students have not interacted with others in the community that learning in the classroom or other concrete communities of practice encompass (Wenger 1998; Wenger 2004; Wenger, McDermott & Snyder 2002)(36)(37)(38). It is in community with others that one can achieve a combination of tacit, or informal knowledge with explicit, or formal knowledge (Wenger 1998; Wenger 2004)(36)(37), or, applying the above mentioned terms, combining the "know what" and "know why" of the subject with its "know how" and "know who" (Flyvbjerg 1993; Hemmingsen 2000; Scharmer 2001; Thomsen 2001)(8)(15)(26)(34).

It is via practical learning that the students can adapt and weigh up that which they are learning. Meanwhile, much points towards the fact that the distance learning students are too focused on that which they are reading, i.e. the theory, because they have spent so much time alone with the theoretical material and have only had the seminars to get things illuminated and put into perspective, in interaction with others and in relation to practical scenarios.

The world of the distance learning students becomes somewhat rigid or theoretically abstract through only reading and being alone in trying to understand, and that hinders them in seeing nuances and the fact that things in combination can be understood in several ways. The distance learning students also expressed in relation to the theoretical part of the education that they missed the interaction with others with a view to getting that which they read at home differentiated and put into perspective. As Wenger describes it, the community promotes the formation of social structures and knowledge with inbuilt tacit dimensions (Wenger 1998; Wenger 2004)(36)(37). The putting into perspective and differentiating in community with others is something the distance learning students need. They think too much, and in a restraining way, over what they have learned in the theory and how they can connect it with practice.

In relation to the programme, it is, therefore, shown here that the distance learning students have more difficulty in combing theoretical explanations with practical actions than the other students. It emerges, that the distance learning students are characterised as not having had the theory differentiated and put into perspective in a professional way in the classroom. They are simply in need of that form of socialisation into the subject, which is provided in the classroom. This results in them being dependent upon the theoretical explanations in a synthetic or rigid sense when they need to carry out concrete nursing activities.

The differentiation and putting into perspective of the theory, which they apparently need from the theoretical part of the education, is something they must learn in the clinical training. In practice, it is the community of practice at the particular location, together with their supervisors that must be used for this, and, on this issue, it emerged that the students were generally very much in agreement.

Responsibility for own learning

During the observations, it emerged that there were differences from department to department concerning how and by whom the students were supervised. Under the interviews, the students expressed that, for them, good supervision was when you talked about the patient or the situation before commencing. The supervisor should thereafter observe the process or the practical situation and, in conclusion, reflect upon it with the student. The students believe that the subsequent reflection is important. Therefore, they also concur in their belief that nursing auxiliaries and social and healthcare workers are not competent enough to carry out this supervision. They are good enough to learn practical skills from, but, for all the students, it is important that there is a nurse in the background to bring together the theoretical perspectives, explanations and reflections for the practical application of the profession. The quotations below concern precisely this aspect,

"Yes, a good supervisor is someone such as a nurse; she has a good basis for doing the things she does and can explain them.....Yes, it is her background knowledge; she has a greater background knowledge than the social and healthcare workers and nursing auxiliaries I have been assigned to down there....."

"...some are better than others; you can sense that a nursing auxiliary cannot do as much as a nurse, so it is more exciting to follow a nurse than to follow an nursing auxiliary....."

Even the transfer students, who are themselves educated as social and healthcare workers, actually say that they can now see all that which they needed prior to their further education. They say that it is remarkable how clear it becomes during the education that they have previously gone around and done many things without knowing the deeper reasons for doing them.

Considering the forms of knowledge in relation to this, it is then possible, as previously indicated, to say that knowledge is a very differentiated and complex issue, which combines the four dimensions: "know-what", "know-how", "know-why" and "know-who". The point is that all four must be in play in order that learning can be optimised and a professional academic ability be developed.

The students express that it is not least the subsequent thoughts and reflections over their actions in a given situation that are important for them.

They emphasise that, as previously mentioned, they can learn in a very practical way, and that they can learn skills from nursing auxiliaries or social and healthcare workers. This is a case of "know-how" which is achieved through practice, and this is a knowledge form they can learn through participation and by following nursing auxiliaries and social and healthcare workers in their practical work. However, this is insufficient. They also want the theory and explanations attached, and in this connection they need a nurse who can tell them what it concerns and why. The nurse is also in possession of the"know-what" and"know-why" of the profession.

One of the explanations as to why the distance learning students do not focus so much on learning in the practical situations, but more on the importance of the theoretical dimension, could be that, as previously described, they possess a personal competence, or a private "know-how". They have, meanwhile, a need for a professional"know-what" and"know-why", and, therefore, they are occupied by getting the theories ("know-what" and"know-why") attached to practice at this development stage in their education, and in this connection they need, as stated, a nurse.

In relation to the question of guidance or supervision in the clinical training, the students were also asked about whose responsibility it is that they learn something during the clinical training. Here, almost every student from all three classes expressed in the interview that it was their own responsibility to learn something in the clinical period. Only a small number expressed that it was a shared matter between the supervisor and themselves, where several also mentioned that the overall responsibility and the overall planning of the period was the supervisor's.

The students feel, therefore, that it is their own responsibility to sense what they need in relation to the plan for the period, to draw attention to what they would like to see and still need to learn, etc. But at the same time, they express that it is nice if you have a supervisor who also thinks about this. They also generally say that it is their own responsibility to go home and read about that which they see, experience, etc.

The following quotations from the distance learning students document this,

".........It is of course completely up to me; it is my choice if I want to learn something; then they don't need to spoon-feed me.....it is just as much me that needs to take the initiative, it's in my own interest........"

".........My supervisor has actually written down that which I really need to focus on.......Yes (the supervisor) makes the plan for me and all the various people I need to follow. Then it is easy to say, well, it's this which I am focused on now, and then I would like to that....."

Also, the students under the traditional programme express this,

"It is my responsibility that I learn something; my supervisor guides me in doing things correctly, but it's my responsibility to learn and try myself ..."

"……….what you have to learn is standing in the curriculum, and so it's partly up to the supervisor to see that you get a structured programme, but of course, I think it's your own responsibility that you also get through it, so you also need to speak up if you think that you need something or other, but it depends on how much you want to learn yourself....."

All the students thus feel that they are fundamentally responsible for getting something out of the clinical training and for learning something during the period. Their approach to learning and to taking the initiative themselves, and to be investigative, however, differed very much, just as the research as presented in this article shows that the students themselves cannot always assess whether their competences are sufficiently professional. Therefore, a great responsibility is placed on the departments, and not least the supervisors, to ensure that on the basis of the students' different backgrounds they get the right supervision and the right learning possibilities.

Conclusion

This article contributes with findings and discussions of findings that not only correspond with the differences in the programmes, but also to a great extent have a basis in the types of students who are attracted to the programmes. As other studies previously have shown (Gomory 2001; Oblinger 2003; Oblinger 2005; Shovein, Huston, Fox & Damazo 2005)(11)(23)(24)(28), findings from this research also show that the distance learning students are typically mature students with an average age >25 years old. This is another generation of students, which are represented by some other experiences and some other needs in relation to the students of the traditional education.

Research has previously shown that every generation of students is defined by different life experience. Therefore the students are marked by different learning styles and by different ways of communicating (Oblinger 2003; Oblinger 2005)(23)(24). In relation to this, this study show that several important tensions have been found to exist between personal

competences and professional competences in relation to learning for the distance learning students. They are tensions which, if exploited, can optimise the learning conditions for this group of students, while they can also hinder their learning if no focus is placed upon them.

The research shows that, firstly, there are differences in the students' appearance or behaviour in practice dependent upon the programme when they come directly from the theoretical part of the study programme. It might perhaps have been expected that the students under the traditional programme were the most practical, as they have been socialised into the profession through their dealings with fellow students and teachers at the school. It might similarly have been anticipated, based on prior research (Simpson 2003; Sitzman & Leners 2006)(31)(33), that the distance learning students, due to the reduction in nursing practice lessons, as well as the lack of interaction during the theoretical part of the programme, had more difficulty in progressing. It emerged, however, that the distance learning students differentiated themselves from the traditional students in this area, and they did so because they brought with them their personal competences and experiences and put them into practical application.

It emerged that the distance learning students were the most practical when they came from the school, because they used their everyday or personal competences or their personal "know-how" in their practical work and in their dealings with the patients. That gave them some experiences in the practical work which contributed to optimising the learning potential and the adjustment of their personal competences in the direction of a professional care competence. In contrast to what might initially be expected, it was thus the distance learning students that, on the basis of their practical experiences and targeted study habits, were in the beginning better at the practical work, while the younger students from the traditional teaching programme were more uncertain and cautious.

Findings from the research show, secondly, that there are differences in the students' ways of communicating, dependent on the programme, when they come directly from the theoretical part of the programme. Here, it might have been expected that the programme had prevented the distance learning students from training their communication skills and isolated them, but it was shown in the research that they were not affected by difficulties in communicating. On the other hand, they were affected by not being trained in professional technical communication.

The experiences they gained in this area were that it initially worked well to create relationships and to communicate based on their personal competences, which is why they felt no need to develop a more professional communication competence. In contrast to what might initially be expected, it is actually the distance learning students who, on the basis of their practical experiences, are initially best at creating relationships and at communicating, while the students from the traditional programme are more uncertain and have a need for a role model. In that way, a tension between personal and professional communication competence does not arise to the same extent in the distance learning students, which is why learning in this area is not motivated to the same degree as with students under the traditional programme. This difference must be said to be of great significance for the development of a professional technical language under the distance learning programme.

Seen in relation to findings from observations and interviews in the theoretical part of the education, where the distance learning students only get to train their technical language at the seminars, it is thus important that, in both the clinical and the theoretical part of the education, focus is placed on the development of a professional technical communication competence.

Previously research has shown, that a disadvantage with the programme is, that physical presence in the classroom with the possibilities that entails for providing teaching and learning with the "human touch" are removed (Shovein et al. 2005)(28). Many believe that this is problematical, particular in relation to the fact, that the nursing profession demands personal and humane qualities, which traditionally have been developed in dealings with other people (Simpson 2003; Sitzman & Leners 2006)(31)(33). The above findings from this study show, that the distance learning students compensate for this problem, by bringing their personal competences into practical application in the clinical training period.

The research shows, thirdly, that the distance learning students are seeking professional theoretical reflection in their supervision. One of the explanations as to why the distance learning students focus less on the importance of the practical than on the theoretical dimension can be that they, as previously described, are in possession of a personal competence, or a private "know-how". The distance learning students have, therefore, at this stage of the development in their education a need to attach the theories ("know-what" and "know-why") to practice in a professional way, and have, therefore, a need for supervision by a nurse.

Suggestion for teaching design – a perspective

The findings from the clinical training show that the group of distance learning students work in a targeted way and are well prepared. The distance learning students bring their practical experiences or personal "know-how" and their targeted study habits with them into the clinical part of the education, and this can be used positively to optimise this type of student's learning conditions, but it can as stated also mean that they in some important areas are cut off from experiencing that they have a need for professional supervision and support. Therefore it is important that in the teaching design for distance learning, regard is given to the competences the students bring with them, as well as for the different learning related consequences the involvement of these competences can lead to.

The distance learning students use their personal "know-how" in their clinical work, which gives them some experiences that contribute to optimising the learning potential and "adjustment" of their personal competences to a professional care competence. The research shows that the distance learning students, on this basis, are certainly equipped to learn the clinical nursing competences.

Communication, on the other hand, and the professional technical language are aspects which the distance learning students are in danger of not getting developed. The distance learning students are not affected by general difficulties in communicating, but are, nevertheless, affected by the fact that they are not trained in professional technical communication. In this area, they also use their personal competences, but as they

experience that they initially function well in creating relationships and at communicating based on their personal competences, they do not feel or notice the need for developing a more professional communication competence.

In the clinical part of the education, the clinical professional personnel must pay attention to the fact that, in relation to this type of student, there must in the supervision be focus on the interaction between the competences the students come with and the competences they must develop, so that their personal everyday competences are exploited during the clinical training as a basis for the development of a professional communication competence. The students have a need for a professional "know-what" and "know-why" in order to develop their personal "know – how".

With this as a basis, the teaching design that traditionally prevails for learning in practice in nursing education should be amended for this group of students.

In connection with this, the teaching design for the theoretical part of the education must also encourage a greater degree of interaction, both between students and between teachers and students. Findings from both the theoretical and the clinical part of the education show that there is a need for increased focus on the development of a professional technical communication competence, and a professional technical language or repertoire among the distance learning students.

Findings from the theoretical part of the education show that the students themselves express that they consider it very important that there is interaction in the classroom during the seminars. In the clinical part of the education, the distance learning students do not focus so much on learning in the practical situations, but more on the significance of the theoretical dimension. The explanation for this can, as previously stated, be that they possess a personal competence or private "know-how". Meanwhile, they require that this is developed and put into perspective with a professional "know-what" and "know-why", and therefore they need to put the theories into perspective in interaction with others. The time at the seminars is insufficient for this, which is why work must also be done on developing communications on the net, so this can become both more interactive and toned by technical language.

Thus, interaction can and should be established in the periods between the seminars. This requires that the students are made to realise that it is worthwhile, and that the work of the students between the seminars is of a nature which demands and encourages interaction. The teaching design must match and promote the fact that the distance learning students specifically choose interaction continuously throughout the course of the education programme.

Acknowledgements

Observation and interview guide

Observation guide:	Interview guide:
Theoretical knowledge & guidance *Responsibility for own learning*	
Teacher/student roles, including working methods/ didactic design	Questions in relation to teacher/student roles, including individual understanding of learning, plus working methods
Creating relationships	
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
Communication & developing a technical language	
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
Competence development	
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
Outside of category	
Observations outside the categories	Questions in relation to observations outside the categories

Table 1 - Categories for observation and interview

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