A CONSTRUCTIVIST APPROACH TO TEACHING AND LEARNING AT THE DEGREE PROGRAMME IN NURSING AT NOVIA UNIVERSITY OF APPLIED SCIENCES

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SAMMANFATTNING

YH Novia har valt den konstruktivistiska pedagogiken som gemensam grund för undervisningen. Denna rapport visar hur Degree Programe in Nursing har anammat konstruktivismen som grund för undervisning och också för läroplansutveckling. Rapporten börjar med en kort beskrivning av programmet och fortsätter med en beskrivning av konstruktivismen. Rapporten beskriver också hur vi konkret har anammat den konstruktivistiska pedagogiken i undervisningsmetoder, praxis och läroplansutveckling. Som bilaga till rapporten finns läroplanen, där de allmänna och professionella kompetenserna finns beskrivna. Läroplanen godkändes år 2011.

SUMMARY IN ENGLISH

Novia University of Applied Sciences has adapted a constructivist approach as the overall teaching method This report outlines how the method is conducted at Degree Programme (DP) in Nursing. The curriculum is presented in the beginning of the report followed by a description of the constructivist approach and how it is incorporated it in the teaching methods and the outline of the curriculum. The report also describes hands-on examples of adapting the constructivist approach in daily teaching methods. The curriculum and the key competences, as they were designed and approved 2011, can be found as an appendix to the report.

CONTENTS

INTRODUCTION

Constructivism is adapted as the overall approach to teaching at Novia University of Applied Sciences (hereafter Novia UAS). Each degree programme finds a unique way of incorporating the philosophy of constructivism into its teaching methods. This report is a documentation of how the DP in Nursing adapts to the future challenges of nursing and nursing education, and how it adapts to the constructivist learning philosophy that underpins the pedagogical strategy at Novia UAS.

The report begins by describing the development of the DP in Nursing related to the overall pedagogical development of Novia UAS. It goes on to outlining the constructivist approach in general and how this is applied to the DP in Nursing. The report, finally, includes the curriculum and the specific competences required for modules and courses.

The DP in Nursing is a melting pot of cultures where students and teachers are continuously developing an understanding for each other. The cultural differences can be seen as obstacles, but they can also be seen as a possibility to create a natural cultural competence. Different worldviews, norms and rules are always present and they constitute a natural starting point for discussions.

Being a student or teacher at the DP in Nursing can be challenging. Firstly, because the language of instruction is English, which is not the mother tongue of most of the students or the teachers at the programme. Secondly, because all foreign students are used to different methods of teaching and learning. The different learning styles do not necessarily fit into the constructivist philosophy that underpins teaching at the DP in Nursing.

We have found that the constructivist approach is a resourceful foundation for designing teaching methods and supporting the students' self-directed learning. In the coming two years we will have the possibility to develop our learning environments thanks to funding from the European Social Fund (ESF) in Finland, NOVIA UAS. The project "Utveckling av nya lärmiljöer inom Degree Programme in Nursing" was approved in November 2012 and continues until December 2014. This report is the first of three planned reports within the project and outlines our approach to teaching and learning. The second report concerns clinical teaching in a new learning environment and the third concerns the challenges related to language and culture that the students at DP in Nursing have to face and overcome before taking the step from student to registered nurse.

BACKGROUND

The DP in Nursing is a 3½-year programme which consists of 210 credit units (hereafter cu, equivalent to ECTS) and leads to a Bachelor's Degree in Health Care. The first students at the DP in Nursing were enrolled in 1998 and we are currently working with the 13th batch of Nursing students. The programme was launched in the era of the Swedish Polytechnic and is now a part of Novia UAS. Innovative teaching methods have been applied from the very beginning (see Kennell, Nyback, Ingalsbee, 2005).

14 students are admitted each year. At most we have 4 groups and 55 – 60 students. About 80 % of the students are foreign students. The aim of the Degree Programme is to train culturally competent registered nurses for both national and international work. The key aspects of the programme include health promotion, illness prevention, restoration of health and

the alleviation of suffering. The studies, initially, focus on basic nursing skills, and subsequently move on to provide students with a deeper knowledge of nursing with a focus on cultural competence. The curriculum is based on national and EU legislation (Government Decree on Universities of Applied Sciences 351, 352/2003), national recommendations (Ministry of Education 2006, ARENE 2006) as well as on the strategies decided on within Novia UAS.

The DP in Nursing prepares the students for working with patients of various age groups, in different situations of life and for how socio-cultural factors are related to health and illness. The programme includes 90 cu of clinical education which also includes 15 cu Thesis. Parts of the clinical education can be carried out abroad through our partnership programs. The students are enrolled in different projects during

their studies and the final project leads up to their thesis. The thesis can be conducted in various areas of transcultural/intercultural nursing, the development of nursing, nursing care methods and projects which aim at developing nursing and health care.

A Graduate Nurse is qualified to work in hospitals, hospices as well as in elderly care, emergency care or home care. A majority of the graduates have found work in Finland, but also in other countries such as the USA, Sweden, Norway, Australia, China and in international commissions. The DP has also enabled further university level studies in various fields, such as Caring and Nursing Science, Psychology, Medicine, Public Health, Nutrition, Economics and Management. Exchange students commonly take courses and

modules together with the students at DP in Nursing, since all teaching is offered in English. The participation of exchange students entails short-time participation in several cases which may pose a challenge to the programme, but it may also be advantageous, as a small programme will benefit from 2 or more exchange students from time to time. One example of the possible advantages of accepting exchange students is that we can recruit new students through exchange programmes. One of the exchange students at the Swedish DP in Nursing found the English DP in Nursing so attractive that she applied and was accepted. She began her studies in Irland, came as an exchange student to Novia UAS and finished her studies in Nursing at Novia UAS. She is now working in England.

CONSTRUCTIVISM AS A PHILOSOPHICAL FOUNDATION FOR TEACHING AND LEARNING

Constructivists believe that knowledge is constructed when an individual attaches meaning to an experience or activity (Merriam et al., 2007; Torre, Daley, Sebastian, Elnicki, 2006). The foundation of personal constructivism can be traced back to Piaget (1972), whereas Vygotsky (1978) is responsible for much of the ideas related to social constructivism.

Constructivism has been described as a vague concept but has nevertheless been discussed in many schools as the best method for teaching and learning (Powell and Kalina 2009). Splitter (2009) describes constructivism as an epistemological and psychological theory about how we learn by actively and consciously bringing our past experiences and understandings into a collaborative exercise with other students, as we process, interpret and negotiate the meaning of new information. Each of us generates our own "rules" and "mental models" which we use to make sense of our experiences and Bednar et al (1991) further elaborate that "*the learner is building an internal representation of knowledge, a personal interpretation of experience. This representation is constantly open to change, its structure and linkages forming the foundation to which other knowledge structures are appended. Learning is an active process in which meaning is developed on the basis of experience.... Conceptual growth comes from the sharing of multiple perspectives and simultaneous changing of our internal representations in response to those perspectives as well as through cumulative experience.*

Rutherford (2012), based on Piaget and Wygotsky, distinguishes between personal and social constructivism. With personal constructivism, learning is constructed within the individual and based on prior knowledge, whereas social constructivism posits that learning is constructed in a social environment. With personal constructivism, the learner attaches meaning using previous knowledge and experience; an internal change in cognitive schemata occurs as a result of the learner's connection to the current environment. However, social constructivism results from individuals dialoguing about problems in a social environment. Ruthford's description is congruent with Splitter's concerning the use of previous knowledge, but Ruthford brings forward the idea of constructivism as both personal and social.

Jonassen (1991, 10) describes constructivism as being "founded on Kantian beliefs, [it] claims that reality is constructed by the knower based upon mental activity. Humans are perceivers and interpreters who construct their own reality through engaging in those mental activities...thinking is grounded in perception of physical and social experiences, which can only be comprehended by the mind. What the mind produces are mental models that explain to the knower what he or she has perceived.... We all conceive of the external reality somewhat differently, based on our unique set of experiences with the world and our beliefs about them." Learning is, thus, simply the process of adjusting

our mental models to accommodate new experiences. Students are considered to be active and looking for meaning. Constructions of meaning may initially bear little resemblance to reality (as in the naive theories of children), but will become increasingly complex, differentiated and realistic with time. Splitter (2009) also describes constructivism as a philosophy of learning founded on the premise that we construct our own understanding of the world we live in by reflecting our own experiences which is congruent with Jonassen´s (1991) thoughts.

For many educators, or teachers, constructivism has a variety of meanings. In order for teachers to apply it effectively, they have to know where the students are at a given learning point or what previous knowledge they possess about a subject, in order for them to create personal meaning when new information is given to them (Powell and Kalina 2009). Splitter (2009) agrees and further states that students are active participants in the learning process, rather than passive recipients of knowledge that has been accumulated by others and transmitted to them. Splitter (2009) separates constructivism from social constructionism and says that "*Thus characterized, constructivism is silent on the ontological status of what is thereby constructed. It is, fundamentally, concerned with making sense of our experience, i.e. with "meaning-making". By contrast, social constructionism, as I am construing it here, maintains that not only knowledge, but truth, reality, facts, texts, even ourselves, are social constructs, and that learning (knowing, meaning-making) does not depend upon any kind of fixed correspondence with the "real world" out*

there, either because there is no such reality or because, a la` Kant, it is an unknowable world of noumena which cannot figure in any account of knowledge. Thus characterized, social constructionism is a rejection of objectivism and foundationalism". Splitter (2009) continues by stating that we, in order to prevent constructivism from turning into constructionism, need to ensure that the fruits of the students' constructs are appropriately linked to the "real-world" disciplines. When discussing the link between the students' constructs and the real-world, Splitter highlights "authenticity" which refers to knowledge that carries meaning and value for the student - he names the concept "educational authenticity", to underline the idea that education needs to feel authentic for the student.

Educational authenticity can be understood as linking the "real-world" to the subject of interest. Students bring their past experiences (perspectives, values, attitudes) and their understandings of those experiences to the learning situation. Meaningful teaching therefore requires some acknowledgment and incorporation of the students´ reality. "*We may wish for students to become practitioners in the disciplines they study, but this is a process that takes time and hard work. With very few exceptions, no community of learners can construct knowledge of a discipline or field, unless their deliberations and findings are linked to the deliberations and findings of relevant "experts'... student construction of knowledge must be based on a foundation of prior knowledge. That is, students must assimilate a great deal of knowledge that others have produced*" (Splitter 2009).

TEACHING METHODS OF THE DEGREE PROGRAMME IN NURSING

Any organizational restructuring generates uncertainty, but change is also an opportunity. In this case, the restructuring of the curriculum, launched in 2010, also created the possibility to evaluate and develop teaching methods used at the DP in Nursing. It created the possibility to restructure the modules, course plans and the overall teaching approach. The following chapter describes the overall philosophy, methodology and the expected outcome developed at the DP in Nursing.

MOTIVATION FOR TEACHING AND LEARNING
A crucial prerequisite for learning is motivation, and the motivation for learning is strongly dependent on the student's confidence in his or her potential. These feelings of competence and belief in potential to solve

new problems derive from first-hand experience of mastery of problems in the past, and are much more powerful than any external acknowledgment and motivation (Sylvest 2010).

According to the constructivist approach, instructors need to adapt to the role of mere facilitators rather than teachers, even though both roles and ways of teaching / facilitating must be outlined according to the need of instruction (guidance) and subject.

If a teacher traditionally gives a lecture which covers the subject matter, a facilitator helps the student attain his/her own understanding of the content. In the former scenario, the student plays a passive role, whereas the

latter scenario allows the student to actively participate in the learning process. The emphasis, thus, shifts from from the instructor and the content towards the student. A teacher tells, a facilitator asks; a teacher lectures from the front of the classroom, a facilitator "provides support from the sidelines"; a teacher gives answers according to a set curriculum, a facilitator provides guidelines and creates the environment for the learner to arrive at his/her own conclusions; a teacher mainly gives a monologue, a facilitator is in continuous dialogue with the students. While students should be given ownership of the problem and solution process, the teacher must not condone all activities and solutions. The critical goal is to support the students in becoming effective thinkers. This can be achieved by assuming multiple roles, such as consultant and coach (comp. Chin 2008, Splitter 2009, Sylvest 2010).

PROBLEM- AND PROJECT BASED LEARNING

The overall approach to teaching at the DP in Nursing is inspired by problem- and project- based learning methods as part of a constructivist philosophy. Teachers are expected to coach the students in self-directed learning, which will provide skills for "life-long-learning". In short, this means that we encourage and support the learning process of each student, and see them as unique individuals with unique background and needs (comp. Splitter 2009). The needs and learning styles of the unique individual must adapt to the requirements for passing each module. The student becomes increasingly responsible for his/her learning process, and for fulfilling the criteria stipulated for each project and module. The student brings his or her version of the truth, influenced by his or her background and previous knowledge and experience, culture or worldview and enlarges or renews his/her understanding and knowledge through new knowledge (facts, insights). Constructivism emphasizes the importance of the student being actively involved in the learning process.

COACHING AND SELF-DIRECTED LEARNING

For decades, the main teaching method in higher education has been based on a knowledge transfer model. This is built on a positivistic view of knowledge where students are seen as recipients of "packages" of knowledge to be transferred into their minds. The essential teaching skill is, basically, to be a fluent speaker, whereas less attention has generally been paid to the individual needs of students in the learning situation (Gynnild, Holstad & Myrhaug 2007). Nursing education encourages reflective thinking, nursing skills and the ability to make decisions and act and, therefore, requires a different teaching and learning style. When setting goals for the renewed curriculum,

the mere transfer of knowledge is insufficient. We must instead use the opposite; a method that supports the development of teamwork and project work. The role of the teacher has to change from "speaker" to "enabler" and "supporter".

Coaching is today a recognized discipline used by many professionals engaged in human development. However, as a distinct profession, it is relatively new and self-regulating. Coaching has emerged as a cornerstone of learning organizations in which people-development is a high priority (Sylvest 2010). The success of people-centric environments derives from the realization that the future of the organization depends on its ability to develop the performance capabilities of its workforce. Developmental coaching has its roots in the field of behavioral psychology and its domains in organization development, education, and personal growth. Locke (2008) mentions that it is aligned with Hertzberg's theory about how individuals are motivated by five key factors inherent in their work: challenge, growth, sense of contribution, recognition, and responsibility. Coaching stimulates engagement by satisfying these needs (Locke 2008). Since coaching has its roots in behavioral psychology and this curriculum is shaped by a constructivist approach, there is a need to define how the coaching method should be used and how it can fit into a constructivist way of thinking and acting.

Locke (2008) continues by saying that coaching skills are based on the principles of developmental psychology and fall into the domain of interpersonal skills. They include the capacity to ask thought-provoking questions, to listen actively and the authenticity to share valuable observations without generating defensiveness. This explains why coaching can be adapted as a method for helping the students find their own constructs of knowledge which are linked to facts, reality and place. They should learn to benefit from the knowledge they obtain through internships, as well as the fact that coaching as method can be congruent with a constructivist approach to pedagogy. This fits into the constructivist approach.

Coaching refers to the activity of developing the abilities of a student, and it tends to focus on achieving a particular goal or specific skill. Methodologies for coaching range from the directive to the facilitative methodology: at one end of the scale lies mentoring and training, and at the other end psychotherapy and counseling. Coaching is a concept adopted from the world of sports and is defined as supervising, educating and communicating facts. The concept commonly refers to a method of leadership, but can also be adapted to education (Sylvest 2010). Coaching entail a focus on the goal, whereas the focus

of education is generally the grade or the examination (showing insights, skills, knowledge, readiness) or degree. Coaching can be seen as a pyramid where the process of learning is the fundamental part, and the process is triggered by the dream. However, in order to find the dream the coached needs help to set parts of the final goal: concrete small goals which are easy to evaluate. The dreams are the most important motives for learning. The teacher can assume the role of "coach", and help the coached (student) realize his/her dreams (Sylvest 2010). Coaching is a good way of supporting teambuilding and helping everyone see their own part of the project. According to Phillips (2006), coaching is a way of developing skills and self-confidence among nursing students and can,

according to Chin (2008), help the students structure their studies and find a way out of a difficult situation. Below (Fig. 1) is a visualization of coaching based on a picture shown at a lecture held by Sylvest (2010). The dream is the trigger (the reason for why a nursing student applies for a place at a degree programme) and the process, according to Splitter (2009), starts when the student can construct his/her own meaning from the information delivered (how can I use what I learn). The student is then, with the help of the coacher or lecturer, able to outline concrete parts of the goal that will lead to a degree (criteria required to become a nurse) and, if possible, fulfill the dream (which might change during the process due to new insights).
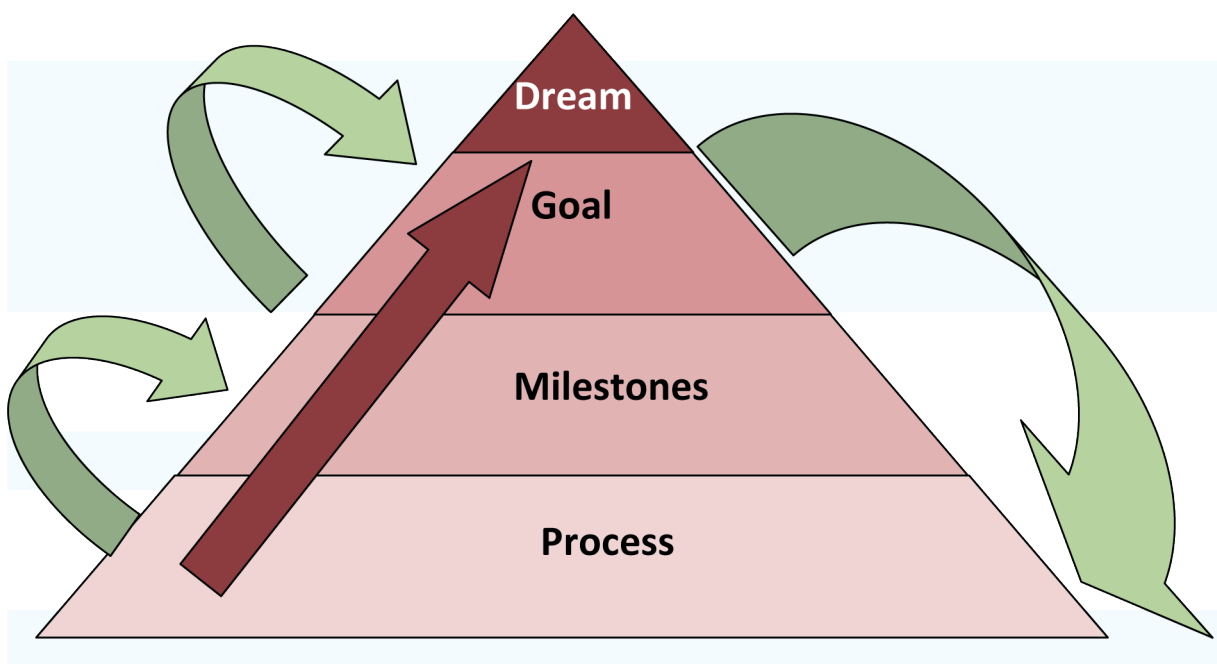

FIGURE 1 The coaching process: a modified version of Sylvest's (2010) model.

Locke (2008) mentions a few characteristics of coaching that strongly influence the outcome of learning. The first is the coach's ability to maintain objectivity, concentrating only on the facts surrounding an opportunity for development. Coaching is not about winning or losing and blame is never part of the developmental coaching process (Sylvest 2010). A useful way to begin a coaching conversation is to share an observation. The more specific and behavior-based the feedback, the more likely the student is to view the feedback as a learning opportunity rather than a personal attack. Locke (2008) exemplifies how a conversation could start with a statement like: "I noticed the dressing

make contact with the contaminated field," instead of a judgment-laden statement such as, "You didn't use proper sterile technique," which helps to keep the conversation focused on specific behaviors that can be improved rather than assigning blame. Locke (2008) continues with stating how "*an effective coach, in essence, asks the learner to consider the advantages of an alternative approach, rather than directing the learner to take a specific action. For example, the coach might say, "Would you be open to trying a different approach with that dressing?" instead of, "Discard that contaminated dressing and start over."* Constructivism and coaching can encourage the student to participate in self-directed studies, since

the studies are based in reality and carry a meaning for the student. Studies are not an instrument to get a degree, studies are the instrument for fulfilling the dream, and the degree is just a part of the dream. Self-directed studies have been discussed for a long time. The SSDL model is created by Grow (1991, 1996) and it aims to support the teachers in actively encouraging the students to become more self-directed in their learning. The model borrows several key concepts from the situational leadership model presented by

Hersey and Blanchard (quoted by Grow 1991) and is based on the coach's readiness. Readiness is described as a combination of ability and motivation and ranges from "not able" and "not willing or motivated" to do the specific task at hand, to "able and willing" concerning the task at hand. Readiness is situational and may be task-specific. The SSDL model outlines the teacher's role. Coaching is mentioned at the first stage and the role gradually changes from coach to guide, facilitator and delegator.

TABLE 1. The staged self-directed learning model (Grow 1991, 1996)

	Student	Teacher	Examples
Stage 1	Dependent	Authority, Coach	Coaching and drill with immediate feedback, seen in practical courses such as First Aid, Basic Nursing, Surgical Nursing and other practical courses. Informational lectures. Overcoming deficiencies and resistance.
Stage 2	Interested	Motivator, guide	Inspiring lecture and guided discussion, for example, goal-setting and learning strategies. Seen for example in lectures aiming at supporting self-directed studies and home exams
Stage 3	Involved	Facilitator	Seen, for example, in discussions facilitated by a teacher who participates in the seminar as discussion partner (seminars during clinical education, aiming at reaching insight through reflections)
Stage 4	Self-directed	Consultant, delegator	Clinical education, thesis writing, individual work or self-directed study-groups.

The table above is a visualization of the four stages described by Grow (1991 and 1996), related to the teaching activities at DP in Nursing.

According to Grow (1991, 1996), the student needs someone to show the path to the goal, and someone to coach the student towards this goal by giving feedback and helping the student to overcome deficiencies and resistance (Tab. 1). The student is, at this stage, dependent on the coach or teacher. The next stage is when the student has progressed to being interested and merely needs a guide to the subject of interest. The third stage towards self-directed learning is when

the student is involved in the subject or, in Splitter's (2009) words, when the subject feels authentic to the student and the teacher is a facilitator. At this stage, the students can be engaged in project work; a project work without given outcome. The final stage consists of the self-directed and mature student who can link his/her constructed knowledge to the real world and find it authentic and meaningful.

PLANNING THE PROGRAMME BY USING A CONSTRUCTIVIST APPROACH

Constructivism supports the education of nurses by improving critical thinking skills and encouraging a rapid adaptation to changes in evidence-based practice. Developing the ability to gather information, analyze it critically, evaluate it experientially, and then develop a new framework for the information is the best way to produce nurse graduates with critical thinking skills (Candela et al 2006).

According to Brooks & Brooks (1993), a curriculum based on constructivism has to acknowledge the prior knowledge of the students and should be based on a problem-solving approach where the student can adjust and increase his/her prior knowledge with something new through solving given problems. The theory of constructivism outlines how educators must focus on making connections between facts and fostering new understanding in students. Instructors tailor their teaching strategies to student responses and encourage students to analyze, interpret, and predict information. Teachers should also rely heavily on open-ended questions and promote extensive dialogue among students. Constructivism calls for the elimination of grades and standardized testing. Instead, assessment should become part of the learning process, in order for students to play a larger role in assessing their own progress.

There are several guiding principles of constructivism outlined by Brooks & Brooks (1993)

1. Learning is a quest for meaning. Therefore, learning must start with the issues around which students are actively trying to construct meaning.
2. Meaning requires the understanding of wholes as well as parts and parts must be understood in the context of wholes. Therefore, the learning process focuses on primary concepts, not isolated facts.
3. In order to teach well, we must understand the mental models that students use to perceive the world, and the assumptions they make to support those models.
4. The purpose of learning is, for the individual, to construct his or her own meaning, not just to memorize the "right" answers and regurgitate someone else's meaning.
5. Since education is inherently interdisciplinary, the only valuable way to measure learning is to make the assessment part of the learning process, ensuring it provides students with information on the quality of their learning.

According to Brandon & All (2010) constructivism can be easily integrated into nursing education in the clinical setting, but it can also be implemented in other settings and promote the students responsibility for their own learning..

The curriculum for the DP in Nursing is based on national and EU legislation (Government Decree on Universities of Applied Sciences 351, 352/2003), national recommendations (ARENE, TERVA) as well as on the strategies decided within Novia UAS. The programme consists of both theoretical and practical periods. The practical periods are carried out in elderly care, in specialized care at hospitals and in home nursing care. The curriculum is based on key competences divided into general and professional competences. The competences can be seen as the overall criteria of the education. The curriculum consists of modules with specific learning objectives founded in the specified competences. The modules are divided into courses with even more specified learning objectives which are also founded in the competences. A course can consist of several parts. This way of structuring the curriculum enables the focus on specific concepts as parts of a whole (comp. Brooks & Brooks 1993). Below an example of a module (NU10SN) consisting of 3 courses (SN01-03) where each course consists of different parts (a-c). This system allows for an overall description of competences for the module;

NU10SN
The student
- *Is able to, in a systematic and diligent way and with consideration to the patient's cultural belonging, assess the patient´s needs, as well as plan, implement and evaluate nursing care in a surgical and perioperative setting.*
- *Has the ability to plan for health promotion and support the patient in healthy decision-making.*
- *Has skills in developing a trusting relationship with the patient*

as well as a description for the courses (below the course NU10SN01 Surgical Nursing)

The student
- *Has knowledge of surgical and perioperative care and knowledge of gynaecology. He / She has knowledge in the treatment chains and understands the etiology and surgical treatment processes of the most common surgical diseases.*

- *Is able to monitor the patient´s condition, symptoms and the effectiveness of surgical care in the treatment of surgical diseases, as well as conduct pain assessment and apply the principles of rehabilitative health care*

and furthermore detailed learning objectives for the different parts in a course (below NU10SN01 part c)

The student
- *Has knowledge of gynaecology and can, with consideration to the patient's cultural belonging, assess the patient's needs, as well as plan, implement and evaluate nursing care in a gynaecological setting.*
- *The student has basic knowledge of the most common gynaecological diseases.*

The courses are evaluated as a whole, not as separate small parts (following the example above, NU10SN01 is evaluated with one grade). The division of courses into different parts facilitates the student's grasp of all competences that belong to a course and, also, helps the teacher see the range of the separate parts (comp Splitter 2009, Brooks & Brooks 1993 and Powell,

& Kalina 2009). It may in addition help the teacher avoid projects that are too extensive in a module, as the amount of hours (1 cu=27h of work for the student) is set.

The student has to fulfil the competences of every module in order to obtain the degree. The curriculum with course descriptions can be found on the Intranet and each module, course and part is presented at the initial lecture. Furthermore, each student has access to an Information page on the Moodle platform (Moodle is an abbreviation for Modular Object-Oriented Dynamic Learning Environment and is a free source e-learning software platform, also known as a Course Management System, Learning Management System, or Virtual Learning Environment), where plans for each group are presented and a short version of the curriculum is accessible.

We strive to involve working life (supervisors and administrators at different hospitals, in elderly care and from different organisations) in the development of the curriculum.

NU10SN Surgical Nursing 16cu

NU10SN01 Surgical Nursing 8 cu

a) Nursing Process in Pre-and Perioperative nursing including Anaesthesiology
b) Nursing Process in Surgical Nursing including most common surgical diseases
c) Gynaecology

NU10SN02 Pharmacology 4 cu

a) Pharmacology
b) Drugcalculation

NU12SN01 Practice in Laboratory environment - Surgical Nursing 4 cu

a) Radiography and Laboratory test
b) Case studies

CONSTRUCTIVISM, COACHING AND SELF-DIRECTED LEARNING IN PRACTICE

The really challenging work begins with the changing of paths that has been followed for a long time. The new curriculum, created in 2010, should not only be a paper tiger hidden in a drawer. It needs to be implemented and subject to constant evaluation. In order to change old paths and create new ones, we need to have clear goals and be open to new solutions for old problems.

When applying constructivist theory to nursing

education curricula in both theoretical and clinical settings, the ideal is, according to Brandon and All (2010), that students are taught concepts rather than large amounts of content-laden material. Typical interaction between the nursing student and faculty, whether online, in clinical contexts, or on campus, has historically consisted of lectures where students have been passive recipients of information.

There are certain ideas for how to carry out the necessary changes and the curriculum will support the new ideas as follows.

1. The student will, in every new course or module, have to reflect on what the learning outcomes of this course are and what they mean to him/her. The student's previous knowledge of the subject will be acknowledged (comp Splitter 2009, Powell and Kalina 2009), and he/she will be encouraged to develop the knowledge or get credit for it, in case the student's knowledge is similar to the learning outcomes of the module or course (APEL). This will enable the student to, with support from the study counselor form an individual study plan for the studies. It must, naturally, be shaped within the limitations of the programme (courses and modules are offered only once/year), but offers the possibility to form specific expertise by choosing courses and modules from other universities.

2. The student needs to be self-directed in his/her own learning in order to compose specific expertise and this ability cannot be expected at the beginning of the studies. The student is, initially, dependent on the coach/teacher and needs the coach's help to find the path to the goal through confirmation of thinking, doing and learning the right things (comp. Brandon 2010). The student will, during the first years, gradually change from a dependent student to an independent one by participating in learning projects and independently searching for knowledge that has a meaning for the student and his/her growth and development in the profession (Comp Grow 1991, 1996). The students can create their own portfolio, which will demonstrate their knowledge and expertise and, also, be a source for reflections and development. This requires mature and motivated students.

3. The evaluation is done in modules and courses will, of course, also be evaluated and registered. Each module is planned to require a "module report" which will be part of the learning project product and, also, prove that the student has constructed his/her own knowledge which is linked to reality. A qualitative approach which emphasizes reflective thinking will mainly be used, but courses and modules where facts (mainly courses in natural science) and reproduction is in focus may also apply a quantitative approach. However, these courses and modules will also need to adapt the reflective approach in some way; the student has to reflect on why this knowledge is appropriate and why it has to be evaluated in this way.

4. The project-based learning style is applied. This will enable the student to be creative, work in teams and, also, acknowledge the knowledge of the other team-members. Role-play, case studies and simulation are seen as good methods to open up for understanding certain situations. It is used mainly in practice, but also in other courses and modules.

Simulation is an important part of project-based teaching and this construction of knowledge can be initiated from a personal constructive perspective or a social constructive perspective. Simulation can be staged for one person or a group of students who work together. Redford (2012) shows that constructivism can be used as a foundation when creating simulation learning options. Simulation creates an environment for active learning to occur; the student constructs knowledge by attaching meaning to the simulation experience and connecting the attained knowledge to a current or future situation with a patient.

PROJECT-BASED TEACHING METHODS AND STUDENTS' INDEPENDENT PROJECTS – A GOOD LEARNING ENVIRONMENT

The constructivist approach has been used in the DP in Nursing for a long time, but the approach has not been visible in the curriculum, nor has it been discussed among students and teachers as a specific philosophy underpinning teaching and learning (one of the hidden norms and rules mentioned in the introduction). A renewed curriculum for the DP in Nursing, as well as renewed curricula for all programmes at Novia UAS, was introduced in 2009. At Novia UAS all DP programmes agreed on the constructivist approach and the DPs adapted the philosophy differently depending on the subjects, teaching methods and education area.

One of the main reasons for renewing all curriculums, was to establish common modules for all degree programmes which could provide Novia UAS with an identity and a certain brand. One of the common modules is Sustainable Development. This guarantees that the graduates of Novia UAS possess certain knowledge of this matter, which is congruent with the fact that Novia UAS is certified as an educational institution following the principles of sustainable development (ISO 9001 and ISO 14001).

Another purpose of the new curriculum at DP in Nursing was to adjust the teaching methods so they would, more effectively, meet the challenges of the future. In adapting these methods of education we at the DP in Nursing, as well as the other degree programmes at Novia UAS, focused on project and team work. A new perspective on the roles of student and teacher also emerged: a shift from the transfer of information to the construction of knowledge. At the DP in Nursing we try to involve the students in all activities by inviting representatives from all classes to participate in meetings where matters concerning planning and implementation of teaching is involved. The students' voices are heard and their ideas are taken into consideration. It is important to acknowledge their experiences of different teaching settings and their activity is crucial for their own learning possibilities.

We, at the DP in Nursing, are heading towards working methods that are consistent with the student's future working field, such as small projects that fall within the competences for the different modules but are conducted in close relation to the working field. This chapter introduces some of the projects at the DP in Nursing. As stated above, we have adapted a constructivist philosophy as the foundation for teaching and learning and used a project-based teaching approach which includes the development of teaching methods and, also, an involvement of organisations (such as NGOs, Healt Care Centers, Vasa Central Hospital) in the region.

The students' involvement in the different patient organisations (NGO) can here be mentioned as an example of the project-based learning approach and points out the direction we have for the future.

In the autumn of 2011, a group of students were involved in an information campaign arranged by the support organisation for celiaci-patients. The project was conducted within a course named "Epidemiology, Endemic Diseases". The students planned the occasion and evaluated their learning outcome.

Another example of project-based learning is the celebration of International Nurses day. In May 2012, group NU11 celebrated the International Nurse's Day by inviting people at the library in Vaasa to health information sessions. The group also presented nursing education in different countries as well as caring science with the help of posters. The planning of the occasion was done as a part of the course "Project and Teamwork", the content of the health information was a result of nursing skills taught in the course "Basic Nursing" and posters presented were done as part of the course "Professional English". This way the students were able to form a meaningful whole out of different parts.

The DP in Nursing maintains a strong link to research, which is visible in the evidence-based material used in teaching and thesis writing. The students write their thesis on commission from an organisation or institution. One example of this is when students in NU8/08 wrote their theses within the Medibothnia project and presented them on a conference where representatives from different organisations and institutions were present. Students in group NU9/09 wrote their thesis in co-operation with the municipality nearby (Korsholm). Their thesis covered the problem of obesity in our society and aimed at finding new innovative methods to reach people at risk. Their presentations were a part of further education for the staff at Korsholm Health Centre.

CONCLUSION

This report describes how the DP in Nursing faces a number of challenges, related to teaching and learning, since it is aimed at students from different parts of the world, with different pedagogical experiences and different views of their future. These challenges necessitate the shift from transference of knowledge to construction of knowledge. To construct learning environments that encourage the students to learn and to get in contact with the future working environment is a challenge, but an inspiring one. The DP in Nursing

face the challenges of having students from different parts of the world, with different experiences of teaching and learning and also different views of their coming work.

It is of great importance that the methods used in the programme supports the personal reflections of the student and helps them internalize the knowledge in an independent way. Constructivism can be seen as an effective tool to achieve this goal.

The modules and courses of the curriculum form the framework for teaching and learning, but focus must, primarily, lie on the actual content of these modules and courses - how it is communicated and received. An overview of the curriculum for the DP in Nursing is outlined in Appendix 1. The curriculum was developed during the academic year of 2009 - 2010, launched in the academic year 2010 - 2011 and has in 2012 undergone an audit by The Finnish Higher Education Evaluation Council FINHEEC.

The curriculum was developed by the Head of the Degree Programme in Nursing Maj-Helen Nyback. Lecturers Nina Vestö, Irén Vikström and Carina Nordman-Byskata commented on it and contributed with valuable input.

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APPENDIX 1: CURRICULUM FOR DP IN NURSING 2012

DESCRIPTION OF THE CURRICULUM

Today we can see a worldwide movement of nurses and presumptive patients. The nurses will meet patients from various cultures and with various needs. The Degree Programme in Nursing begun in 1998, and aims at educating nurses for both national and international work. Students from all over the world have attended the programme, and graduated as nurses. A majority of the graduates have found work as nurses in various settings in Finland, but also in USA, Sweden, Norway, Australia and China as well as in international commissions. The programme has also functioned as a springboard for further studies in Caring and Nursing Science, as well as in other sciences on and Academic level.

The aim of the Degree Programme in Nursing is to educate culturally competent registered nurses on Bachelor level. The key aspects of the education include clinical competence, decision-making competence, counselling and monitoring competence, and competences in health care and promotion. The education gives competence to work as nurse in various hospital settings, elderly care and home nursing care.

Having students from different cultures and countries forms a multicultural environment. The Degree Programme in Nursing has Nursing as the main focus, takes 3½ year (210 cu) and 75 cu are activity based teaching (practice) in various nursing settings. The practice can be conducted abroad in Europe and some students even prefer to go to more distant places like China or African countries. The multicultural environment, offered by DP in Nursing provide valued skills for the future; cultural competence and a good education in Nursing.

The curriculum below shows how the studies are planned. Firstly is a description of the key competences (following the strategies found in the national recommendations for competences, Arene 2006) Secondly the learning outcomes for each project, module and course followed by an overview of the different projects and modules that form the curriculum. The key competences are based on the national recommendations given for nursing education.

The main content of the curriculum is found in the description of each presented project. Each project is accompanied by learning outcomes formed by the key competences and with a recommended teaching method. The DP in Nursing features a modified form of "project based learning", "learning by development" is adapted

as teaching and learning method. Every project also has moments of self-directed learning (by using Moodle platform or other internet based tools) and seminars.

DESCRIPTION OF KEY COMPETENCES FOR DEGREE PROGRAMME IN NURSING

General Competences; Learning competence, Ethical competence, Communicative and social competence, International competence

Learning competence

The student understands the necessity of a constant development of knowledge and skills in the profession. The different learning styles, various sources of knowledge and learning opportunities are familiar. Project and teamwork are well known and often used methods for learning. Oral and written presentations are familiar methods for sharing knowledge with others. The student can plan, organize and develop his/her own activities.

Ethical competence

The student Has the ability to, in collaboration with other stakeholders (client, patients, colleagues) be respectful and equitable in his/her work and appreciate the other person's/others' perspective. The work is based on professional ethical values and the responsibility for one´s own activities. The principle of sustainable development is adopted in daily activities.

Communicative and social competence

The student can analyze and influence human interaction by using social, cultural and communicative competence. He/she can communicate professional knowledge clearly in different contexts.

International competence

The student is prepared to make nursing care assessments in nursing care based on the patient's cultural and ethnical belonging and has the ability to speak several languages (minimum Swedish, Finnish and English) which promotes international exchange both in student- and working life. The student can work in a multicultural team and is aware of the effects of internationalization and its potential contributions to nursing.

Professional competences; Competence concerning correct treatment of the patient/client, Clinical competence, Health-promotion competence, Counseling and mentoring competence

Competence in correct treatment of the patient/client

The student has a holistic view of Man and can use various sciences to describe different views of Man (pedagogy, social psychology, social sciences) in nursing care. The student also has the ability to guide the patient in health promotion, prevention and rehabilitation and to understand the organization and function of health care.

Clinical competence

The student is responsible for the patient's physical, mental, spiritual and social care and has the ability to assess the patient's caring needs. The student has the ability to plan, implement, evaluate and document patient care, master the most common examinations and treatments, and is able to use the technical equipment needed in nursing care. The nursing care is based on the principles of rehabilitative nursing care, secure drug treatment and evidence-based research. The student is prepared to act in crises and emergencies.

Health promotion competence

The student has insight into the different phases of the care chain and understands the aetiology of widespread diseases . The student understands the principles of promotive and preventive health care and has the ability to predict and prevent the health threats for the individual and family/group by supporting the individual and family/group in health-related issues such as empowerment and health promotion.

Counselling and mentoring competence

The student can act as an expert in health care work, as well as mentor and guide both students and patients in different contexts

DP in Nursing – an overview

The table shows, from the left, s= semesters (1 - 7) , modules in bold letters and courses as abbreviations. The courses' division into parts are also shown.

s	Modules/courses/parts			cu

1	**NU10 AS Introduction to Academic Studies 15 cu**
	
	AS01 Study Skills 6 cu
	• Introduction to academic studies
	• Professional English
	• Project and teamwork
	AS02 Swedish 6 cu
	     • Basic Swedish
	     • Swedish conversation
	AS03 Finnish 3 cu
		NU10 SM Society and Man 10cu
		SM01 Health Care and Social Welfare Policy in Finland 5 cu
		• Health Care and Social Welfare Policy
		• Cultural Competence
		SM02 Ethics and Caring Science 5 cu
		• Ethics
		• Introduction to Caring Science
			NU10 SD Sustainable development 3 cu
			NU10 SD01 Sustainable Development 3 cu
			• Recycling
			• Waste management
			• Occupational safety
				28

2	**NU10HB The Human Body 9cu** HB01 Anatomy and Physiology 5 cu HB02 Microbiology, Pathology and Immunology 4 cu • Microbiology • Immunology and Pathology	**NU10BN Basic Nursing 15cu** BN01 Drug administration 4 cu BN02 Basic Nursing 5cu BN03 Practice in Laboratory Environment - First Aid 3 cu BN04 Practice in Laboratory Environment - Basic Nursing Skills 4 cu	**NU10EC Elderly Care 5/10** EC01 Geriatrics and Gerontology 5 cu • Geriatrics and gerontology including pharmacology • Elderly Care **NU10MN Medical Nursing 5/25** MN01 Rehabilitation and Nutritional Guidance 5 cu • Rehabilitation and habilitation • Nutrition and Nutritional Guidance	34
3	**NU10MN Medical Nursing 21/26** MN02 Epidemiology, Endemic Diseases 11 • Health an Epidemiology • National and widespread diseases • Nursing process in a Medical Setting MN03 Practice - Medical Nursing 10 cu		**NU10EC Elderly Care 5/10 cu** EC02Practice - Elderly Care 5 cu	26

S	Modules/courses/parts			cu
4	**NU10MH Mental Health, Addiction and Crisis Management 13cu** MH01 Mental Health, Addiction and Crisis Management 6 cu • Diseases and Disorders in Mental Health • Nursing Process in Mental Health including pharmacology • Addiction, and Nursing process • Crisis Management MH02 Practice - Mental Health7 cu	**NU10SN Surgical Nursing 16cu** SN01 Surgical Nursing 8 cu • Nursing Process in Pre-and Perioperative nursing including Anaestesiology • Nursing Process in Surgical Nursing • Gynecology SN02 Pyarmacology 4 cu • Pharmacology • Drugcalculation SN03 Practice in Laboratory Environment - Surgical Nursing 4 cu • Radiography • Laboratory test • Case studies	**NU10LE Leadership 3cu** LE01 Leader- and entrepreneurship 3 cu **NU10RM Research methodology 3/8** RM01 Research methodology 1 3 cu	35
5	**NU10MS Medical and Surgical Nursing Practice 23cu** MS01 Practice Medical Nursing 2 11cu MS02 Surgical Nursing 12 cu	**NU10OS Optional studies 5 cu**		28
6	**NU10HC Health Care 10cu** HC01 Health and Illness among Children and Adolescents 4 cu • Developmental psychology • Pediatrics • Illness and Health Care among Children and Adolescents • HC02 Adult Health and Home Nursing Care • Global Health Care • Occupational Health Care • Maternity Care • Adult and Home care	**Research Methodology 5/8 cu** • Research Methodology 2 5 cu **NU10T Thesis 10/15 cu**	**NU10CC Clinical Care and Cultural competence 10/30 cu** CC01 Advanced Medical Surgical Nursing Care and Cultural Competence 10cu • Advanced Medical Care • Advanced Surgical Care Oncology • Palliative Care • Patient Guidance and pedagogy • Cultural competence 2 • Quality Assurance 1	35
7	**NU10CC Clinical Care and Cultural Competence 19/30 cu** NU12CC01 Practice in Laboratory Environment - Intensive and Acute care 4 cu CC02 Practice- Clinical Care and Cultural Competence 15 cu Medical-, surgical- and nursing care for the patient at home		**NU10T Thesis 5/15 cu**	24

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