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How to apply an Occupation Paradigm in a Problem Based Learning Curriculum

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ABSTRACT

The increasing demands of professions like occupational therapy worldwide require good quality standards of the education. Traditional education has been based on the notion that teachers have knowledge and are responsible for passing on this knowledge to the students. However, in order to make educations attractive and effective new educational methods have developed. One such method is problem-based learning (PBL) which emphasizes that learning must be an active process involving knowledge as well as cognitive and practical skills and attitudes. This article describes PBL as it is applied with the concept of occupation as the core of an occupational therapy educational program. Occupation is a central concept in occupation therapy. Students need to develop a genuine knowledge and understanding of the occupational nature of humans, the meaning of the concept and environmental influences.

KEY-WORDS
Occupational paradigm, problem based learning, curriculum development

INTRODUCTION

From its origins in 1951, the WFOT has worked hard with issues concerning education programs for occupation therapy. Promoting a global standard of excellence in occupational therapy practice requires a high quality educational system. The WFOT minimum standard for education program is one way to support this aim. Each program reflects the needs and demands of its country and may yield different education methods. This article aims to present and stimulate a discussion on one way to build an occupational therapy educational program. It is based on an occupational paradigm and applies an educational method that enables the students to assume an active role in their learning process.

Since 1944 short courses have been given in occupational therapy in Sweden, but the first regular education for occupational therapists started in 1949. The paradigm of the profession, however, has changed since then. Educational programs were traditionally affiliated with the medical and nursing faculty, which explains the strong influence of the medical paradigm on occupational therapy. Over the years the rehabilitation perspective added knowledge to the profession in relation to changes in society, legislation and regulations. Clients were to served according to their unique view of life and disability. The primary role of occupational therapy is to use, facilitate or develop occupation (Kielhofner 1995, WFOT 2002). This requires a professional paradigm that focuses on human occupation. Thus, educational programs must emphasize the concept of occupation. In our view the concept of occupation reflects some kind of action or doing performed by a human. The human must do something that has a certain meaning for the human. The domain of concern must be the client's ability to handle occupations in daily life. Occupation in daily life refers to the entire task we have to perform to manage work, self-care and leisure. These tasks are influenced by the society they are performed in. Occupation enables people to contribute to society and thereby find a place in their culture (Yerxa, 1989). The student needs to acquire related knowledge from many areas such as human biology, medical sciences and social and behavioral sciences in order to understand the complex concept that is occupation.

During the student revolts of the late 1960s educational methodology at universities needed to change in response to changes in society. Much discussion took place concerning how to create a curriculum that enables students to take an active part in the organization of their studies. One way to try to realize higher education programs promoting discussions about identity, the selection of the content, the legitimacy of knowledge and skills, and the communication system in the education context, is to use PBL. In PBL learning is the main activity; teaching is a supporting activity for learning. Therefore PBL allows critical dialogs concerning the issue identified above. PBL is an

appropriate method for developing skills to cope with ever-changing environments. Since 1986, PBL has been the basic educational approach in all programs at the Faculty of Health Sciences in Linköping.

Becoming an occupational therapist in Sweden requires university level studies. Before entering the university the student must have completed 3 years of upper secondary school. Students who enter the occupational therapy program are at least 19 years old. All university education is free of charge in Sweden, and the students can take a government loan to cover the costs of living during the course of their studies.

CENTRAL PRINCIPLES IN AN OCCUPATION PARADIGM

The central concept of an occupational paradigm was presented by Professor Barbara O'Shea, M.Sc., O.T. from Canada, at our faculty in 1997. It entails students learning to handle any client, in any setting with any type of occupational performance issue. Understanding clients as an occupational therapist implies respecting them as unique individuals with human rights. It requires students to develop skills that enable them to respond to the needs of clients of different genders, at different life stages, with different backgrounds. The students also need to understand and reflect on their own feelings and thoughts that arise in these interactions with clients.

In Sweden today, we observe that the future occupational therapy service will not be based on traditional hospital care. The number of in-patient beds has decreased during the last 20 years and is still decreasing. As a result, community-based services become more important. Through collaboration between county councils and municipalities, high-quality services are being provided to clients. Students need to develop different kind of skills so they can meet clients in a variety of situations, not only in a hospital. Offering clients' service in their own homes requires different skills set than at a hospital ward.

Practitioners know that there is no causal relationship between a diagnosis and occupational performance issues. Already in 1982, Rogers pointed out that occupational performance issues can appear without any disease, and that there are diseases that require medical treatment only, without occupational therapy. An occupational performance issue can have many causes, but it is the client's view of life that will determine his/her level of functioning and the kind of service he/she needs. Therefore, students need to evolve a language that describes occupational performance issues and develop an understanding of the meaning of occupation for the individual. Managing this tremendously complex task requires students to acquire knowledge from many different perspectives. They need to learn to integrate the knowledge from all these areas in order to offer the client good service. Our opinion is that PBL has helped us to develop an educational program that supports students to meet these demands.

COMPONENTS OF ESSENTIAL IN PBL

Generally we think about a problem in terms of a situation that needs a solution. In the PBL context the problem has a broader meaning than usual. It must trigger students to raise critical questions in relation to whatever stage of the educational process that they are in (assessment, intervention, and evaluation). The problem originates from real-life situations, which serve as the starting point for the learning process in which the students develop problem-solving and professional reasoning skills when they analyze and work with the problem. Sometimes, instead of referring to a problem, we choose to talk about a scenario. This way to look at learning requires an integration between practical and theoretical knowledge as well as integration between the different subjects the students have to study. We could call this the second component. Integration between practical and theoretical knowledge requires a balance between academics studies and practical work. One way to easily achieve this balance ought to be via fieldwork. Teachers with a close connection to practical work, for example working part-time in the field, can also facilitate integration. The different subjects have to be integrated in such a way that they help the students to understand the problem they are studying. In order to resolve a scenario, the students may need to study many subject in parallel, such as anatomy, physiology and psychology.

A third component in PBL is self-directed learning**,** which emphasizes the importance of the students´ responsibility and independence in learning. Thus, PBL is a way to implement student-centered learning. Silén (2000) asserted that student-centered learning, responsibility and independence describe the dialectic between frustration and stimulation, chaos and cosmos in the learning situation. The students have the freedom to make independent choices, as long as these are relevant to occupational therapy philosophy, theory, and practice. No university can teach all the knowledge, facts, concepts or skills that may eventually be needed by an occupational therapist. Even if it could, much of the knowledge would be forgotten or become out-dated. After graduation the students always have to learn more so they must have the skills of self-directed learning in order to stay competent after graduation. As a result, 'life-long-learning' skills are promoted. The students need to learn how to learn.

Related to self-directed learning is the component **'**reflection-in-action'**.** By integrating critical reflection and experiential learning, the students will learn through what Schön (1995) has described as reflection-in-action. This component facilitates consciousness-raising and participatory processes of learning, aiming to engage the students as reflective, active participants.

Learning plan.
Learning plans facilitate and develop the students' self-directed learning and help them to discover their own learning style. PBL challenges them to be actively involved in the learning process. Each student writes an individual learning plan for every semester, which includes theoretical and practical learning objectives, learning strategies, identification of resources, and finally, strategies for evaluation. This task implies that the student must draw on previous knowledge and experience to identify needs in relation to the objectives in the study guide for the current semester. The evaluation at the end of each semester determines if the learning objectives have been met and also how the student has developed professional competencies. It is important that students receive sufficient support during the first year in how to understand self-directed learning and in how to establish a sense of ownership over their needs. We have observed that the learning plan can gradually become a natural process for the student. Active students, who identify their own learning needs, tend to be more motivated, engaged and effective in their learning process (Knowles, 1986).

Tutorial groups.
Tutorial groups meeting twice a week, with 7-9 students in each group, are an essential part of our curriculum. The students have the opportunity to discuss and debate issues and are also important learning resources for each other. One reason for using tutorial groups is to increase active learning. In a small group it is easier to focus the discussion on the students' different learning needs and interests. The tutorial group works with concrete descriptions of clients or professional issues (scenarios), many of which are taken from real life. The common aspect of the scenarios is that the clients are always described in an occupational context and in terms of different occupational performance issues. The students have to integrate knowledge from different areas and need to learn to transfer the knowledge from one situation to another. Each group has the freedom to structure its own work and decide which books and articles to read and which specialists they need to talk to about the learning needs they have to meet. The study guide provides them with the purpose of each semester. The tutorial groups also help prepare students for professional practice as they develop communication skills and group skills. If the tutorial group functions well, the student will learn to listen and use critical dialog as a tool for analyzing problems.

ORGANIZATION OF THE PROGRAM

Our program covers three years and is divided into six semesters of 20 weeks each. The students graduate with a Bachelor of Science degree in Occupational Therapy. The structure of the program is organized according to the

occupational therapy intervention process – assessment (year 1), intervention (year 2) and evaluation (year 3) (Figure 1). A central theory of human occupation in our program is the Model of Human Occupation (Kielhofner 1995, 2002). The model is introduced in the first semester in relation to assessment and is also used as a basic model for intervention and evaluation. Other models such as the Canadian Model of Occupational Performance and principles for assessments and interventions such as the biomechanical approach and the neurodevelopment approach are introduced later on.

In the first year, the students learn different ways of assessment and information-gathering and start with observations of people in activities of daily life in relation to their environment. Later on, the students observe and interview their friends and relatives. In semester two at their fieldwork placements, they collect data directly from clients. These assessments aim to identify different kinds of occupational performance issues in different contexts, with different clients, covering all the developmental stages of people's occupational life course. (Sample, see Figure 2.)
Besides assessment, the main focus of the second year is on planning and implementation of interventions that are aimed at enabling clients to manage their daily lives. More than a third of this year consists of fieldwork where the students meet many different persons/clients in different settings with various occupational performance issues. The scenarios that are used in tutorial groups help to critically reflect on diverse occupational performance issues in relation to assessment and intervention. (Sample, see Figure 3.)
In the third and final year the central topic is evaluation of the occupational performance intervention process. The students also study the macrosystemic (society) and mesosystemic (organizations) contexts that influence the unfolding of their professional roles. The curriculum is based on an integration of occupational therapy, human biology, medical sciences and social and behavioral sciences and consists of five courses distributed over six semesters. (Figure 4).
We still use lectures, skills lab and seminars as educational tools. However, these forms complement the tutorial groups, which make up the core of the program. With only 10-14 hours scheduled each week for tutorial groups, lectures, seminars and skills labs, students have time for independent self-study and group work.

Fieldwork.
An important part of the educational content is fieldwork (30 weeks), which begins at an early stage (semester 2) because the students need to engage in hands-on interaction in real-life situations with clients and relatives in different situations. Being able to listen, to feel empathy, as well as being aware of personal reactions are some of the important building blocks for

professionalism, and it is important to start the process of professional development early. During fieldwork the students receive ample opportunity to become critically aware of the complex but essential relationship between theoretical and practical knowledge. The students have three compulsory areas they have to manage during their five periods of fieldwork:

- Elderly people with occupational performance issues
- People with occupational performance issues who are psychosocially challenged
- People with occupational performance issues who are physically challenged

We have identified the area of elderly people with occupational performance issues because this group of clients represents a rapidly growing population in Swedish society. And as we mentioned earlier, the setting where the students are going to work as occupational therapists is shifting from the institution into the community where the people live.

Examinations.
Examinations are a support for the students and help them develop their knowledge. They take place at the end of each semester and consist of three different parts: written, oral and practical. The students must show that they are capable of solving problems and that they have acquired a 'biopsychosocial' analytical way of viewing their work.
(Sample, see Figure 5).

CONCLUDING COMMENTS

How do the students reflect on and value the course of their study? For example, in the last week of the three-year program we carry out an evaluation of the full program. One of the questions is: Would you recommend this program to someone who wants to be an occupational therapist? This question has been answered by nearly 200 students and more or less everyone answered "yes" when the alternative is "yes" or "no". But frequently heard critical comments are: "You need to know what type of educational system you are getting involved in. The first semester was a chock", and, "I really felt confused and sometimes I felt anxiety during the first semester".
When talking to students about the feeling of confusion, many of them identified their main problem to be; "I never know if I have read enough and if I have read the right things." However, evaluations of each semester do show that something happens in semester 4. They felt much more self-esteem, they have more confidence in their own judgment, and they need less external affirmations: "I felt that I can manage PBL". At the beginning of semester 5, one student remarked: "If you only want to be trained as an occupational

therapist the easy way, and not really learn how to learn, then you should go to another program."

PBL provides a solid foundation for life-long learning, and we would not like to go back to the traditional system. We think that PBL has come to stay even if many changes are continuously made in this dynamic system. Faculty and students share responsibility in making PBL a success.
However, we also think it is important to have a basis such as an occupational paradigm in the curriculum too and not only use a special educational approach. Our history tells us that we have not had a suitable theoretical basis for our education 20 -30 years ago, and that still influences our practice. We would argue that still many occupational therapists have difficulties explaining their role and contribution in, for example a multidisciplinary team. Our opinion is that if the program emphasizes the concept of occupation, then students will find it easier to explain and fulfil their roles as occupational therapists at a later stage.

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Figure 1. Structure of the program

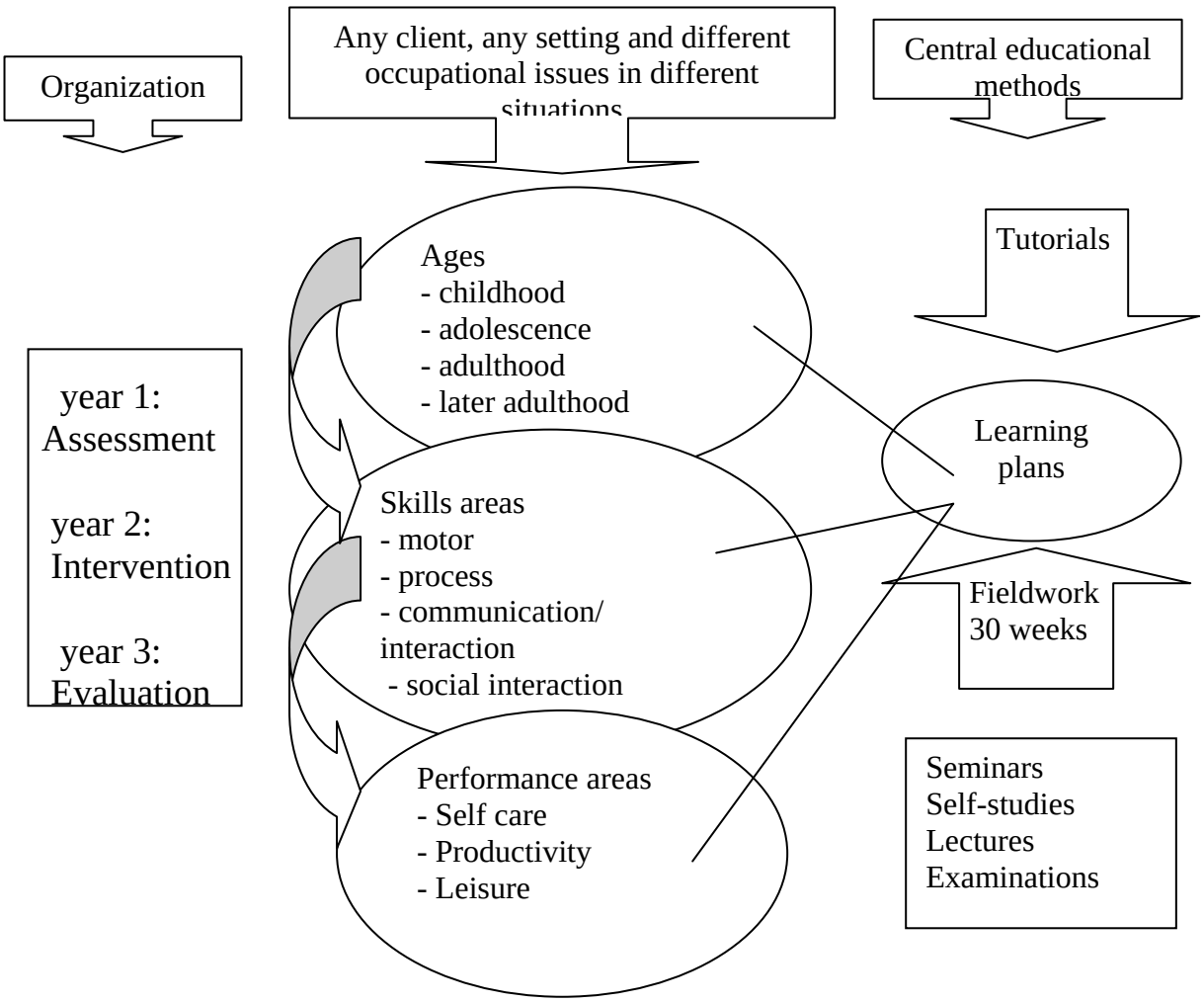

Figure 2: Scenario

Example of a scenario in semester 2:

"Ruth, 84 years old, is living alone in a two-roomed apartment in the central part of the city. She has been a widow for 12 years, has one daughter and two grandchildren living in a city nearby. Ruth is interested in reading, crosswords and her plants are her favourite friends. She takes an active part in the organization for elderly people. As an OT student, you are visiting Ruth at home in purpose to gather data about her occupational performance"

(The students meet "Ruth", who is a "professional client", interview her and make observations. Ruth is a retired occupational therapist so she also gives the students feedback on their professional behavior.)

Figure 3: Scenario

Example of a scenario in semester 4

"Katrina is a 12- years old girl, living with her parents in a small village. She is going in a school and has a personal assistant who supports her during the lessons. Katrina has difficulties organizing her schoolwork and concentrating on important school tasks. She has no friends because she always gets angry with them. She can't control her anger. Katrina is very interested in working with the computer in the classroom even if it is rather difficult because of her left hand. She has cerebral palsy with left- side hemiplegia but after a hand operation she can use her fingers better.
Sometimes Katrina's situation becomes chaotic and she gets frustrated. Her parents wonder if the occupational therapist can help them to structure their situation."

Figure 4. Content of the program

Course	Content	Fieldwork
Human occupational development (40 p): Occupational therapy (20 p) Human biology & Medical sciences (15 p) Pedagogy (5 p) Focus on assessment	<u>Semester 1</u> Occupational Therapy (10 p) Human biology and Medical sciences (15 p) Pedagogy (5 p) <u>Semester 2</u> Occupational Therapy (10 p) Human biology and Medical sciences (10 p)	4 weeks
Occupational dysfunction, (40 p): Occupational Therapy (20 p) Human biology & Medical sciences (10 p) Social and Behavioral sciences (10 p) Focus on assessment and intervention	<u>Semester 3:</u> Occupational Therapy (10 p) Human biology & Medical sciences (5 p) Pedagogy (5 p) <u>Semester 4:</u> Occupational Therapy (10 p) Human biology & Medical sciences (5 p) Psychology (5 p)	7 weeks 8 weeks
Occupational therapy in a changing society (25 p): Occupational Therapy (20 p) Social and Behavioural sciences (5 p) Focus on assessment, intervention and evaluation	<u>Semester 5:</u> Occupational Therapy (10 p) Sociology (5 p) <u>Semester 6:</u> Occupational Therapy (10 p)	10 weeks
Optional courses (5 p)	Public health Vocational rehabilitation Development work Research within the exercise of the profession	
Degree project (10 p)	<u>Semester 5 and 6:</u> Occupational Therapy (10p)	

Figure 5
Example of Examination in semester 1

The purpose of the examination in the first semester is to:

- stimulate the integration between occupational therapy and human biology
- stimulate the students to an active, step -by -step learning process over time.
- stimulate the understanding of human activity and occupation

The examination of the first semester is conducted in a poster session combined with a written paper. The students work in groups of three or four. They are given a situation/scenario three weeks in advance of the presentation/examination. The case is to be presented with references to occupational therapy and human biology. The students present their work with a paper and as an oral presentation, with special reference to the poster. The poster should show the most important factors of the situation/scenario. The students evaluate the learning process after the examination.

Figure 6
Example of Examination in semester 6

The design of the examination in semester 6 is well known to the students in early semesters, but the complexity is higher and the scenarios are presented in new contexts.
The purpose of the examinations is:

- to identify occupational problems
- to prioritize and develop intervention strategies
- to integrate knowledge from the areas of occupational therapy, human biology and medical sciences, behavioral sciences and social sciences.

Students are given a scenario with a client who has different occupational problems. The students can ask for complete information about the client. After 4 hours they come back and present their proposal for an intervention program for the examiner.