Facilitating practical knowledge using flexible forms of learning in the education of Occupational Therapists in Palestine

An action research approach performed in cooperation with teachers in the Occupational Therapist program at Bethlehem University

Rita Jentoft, University of Tromsø, Norway, 2009

Foreword

There are many contributors who under extreme difficult political circumstances made this project possible, so I would like to give my thanks to: The Occupational Therapist (OT) teachers at Bethlehem University; Barbara Lavin, Nelly Husary and Elisabeth Henley who shared their experiences from developing tools and using e-learning to support the Gaza students in their education. The clinical OTs, clients and actors have contributed to make occupational therapy more visual and concrete by sharing their experience and knowledge in films. Health workers in Gaza involved in teaching and supervision of the students. Employees at The Norwegian Association of Occupational Therapists, NETF and The Norwegian Agency for Development Cooperation, NORAD, for their professional and financial support of the project, and their belief that this was important and possible. Thanks to the leadership at Bethlehem University for their support, the encouragement to start and complete the first long distance programme inside Gaza. The media centre at Bethlehem University and the computer centre at the University of Tromsø for their technological support in video-production.

The health department at the University of Tromsø, where I work as assistant professor teaching Occupational Therapy, supported my application by providing time to systematically follow the process. I will also give my thanks to Marianne Aars from studying and discussing e-learning theory and for sharing her knowledge. Professor Britt Kropelien, who developed the software programme of Ergonet, for sharing her knowledge and giving supervision during the establishing phase of developing Ergonet. Unfortunately she passed away before this project was finished. Last, but not least, my appreciation goes to anthropologist and physiotherapist Britt-Vigdis Ekeli for supervising me and following me through the whole project.

Education is of high value in the Palestine society. During this project I have been impressed by the student's strength to continue learning despite all the challenges they meet in everyday life. Hopefully the education as Occupational Therapist gives value to their lives and quality to their service to the disabled people of Palestine.

Abstract

Practical knowledge is essential knowledge in occupational therapy. It is a situated and experienced knowledge, a knowing how and from within the situation. This knowledge has been difficult to facilitate in the learning process of a group of Occupational Therapist students in Gaza. Travel restrictions and the unstable political situation separated teachers and students. Lack of clinical occupational therapists inside Gaza also had a major impact. Educational technology such as videoconferences, internet and films became new and necessary tools. This article is based on results from an action research project following the process of using flexible forms of learning and developing an internet based learning programme named Ergonet and the learning process of the students using it, aiming at answering the following research questions:

1. How do the teachers experience the teaching process of facilitating practical knowledge?

2. How can an internet support program be developed to facilitate practical knowledge in OT education?

3. How do the teachers evaluate the outcome of implementing flexible forms of learning, regarding to the students practical skills?

Pedagogical challenges in facilitating practical knowledge to occupational therapy students in a Palestinian culture had an impact on the way flexible forms of learning were developed and used. Experiences from using tools such as videoconferences, the internet, educational films and evaluation films impacted on the way the internet learning programme was developed. Ergonet contains an occupational therapy knowledgebase and clinical films presenting experienced masters doing assessments and therapy with clients. The films are presented and analysed in small sequences followed by written text, photo, articles and web-sites. Our pedagogical intention has been to develop a creative learning platform enhancing more active and deeper learning strategies among the students. The results indicate how rote-learning and lack of reflective and critical thinking have been challenged and changed by the didactic way Ergonet was used.

CONTENTS

ATTACHMENTS
    1. Informed cooperation from teachers at Bethlehem University
    2. Informed consent to film client and therapists in Norwegian
    3. Informed consent to film client and therapists in English
    4. Mindmap, an overview of the knowledgebase developed from the Occupational Therapist, the Client, Occupation and the Environment
    5. Mindmap, the knowledgebase developed from the Occupational Therapist
    6. Mindmap, planning Ergonet for paediatric knowledge

1. INITIATING ACTION TO CONTINUE THE EDUCATION OF OCCUPATIONAL THERAPISTS INSIDE GAZA

1.1 The starting point

Occupational therapy (ot) is a young profession in Palestine. The first cohort started in 1996 at Bethlehem University (BU) and 50 Occupational Therapists (OTs[1]) have so far graduated. Most of them are working on the West Bank in and around Bethlehem, and in Jerusalem. In 2003, there was an intake of 10 students from Gaza in addition to 18 students from the West Bank. Educating therapists in Gaza was initiated by the leader of the OT programme at BU, Ms. Barbara Lavin, due to the expressed need for OT services for the population of Gaza[2]. Based on interviews with 42 students (3 women and 39 men), 3 women and 7 men were selected. Scholarships were available to enable the students to live and study in Bethlehem to do a Bachelor Degree in OT, from 2003-2007. However the Israeli authorities refused to issue permits for all the Gaza students to travel to Bethlehem. While struggling to get the permissions, the students started their education and completed the first year of study together with other health students inside Gaza. In the autumn of the second year (2004), they were still in Gaza. BU found it difficult to continue the program inside Gaza. The situation was unpredictable.

NORAD[3] and Ireland Aid have since 1996 supported the OT program at BU together with the Norwegian Association of Occupational Therapists (NETF). Through the work of NETF and in cooperation with local teachers and the financial department at BU, my role has been to provide professional support and to follow up financial support of the project. I have been visiting BU once a year, having meetings with students, educators and administrators. I kept contact on a regular basis through the rest of the year through e-mail and telephone. On the yearly visit in September 2004, the Secretary in General from NETF and I decided to go to Gaza. This was an emotional experience for both of us going through the Erez checkpoint and driving through the overcrowded streets of Gaza. We went to El-Wafa rehabilitation hospital meeting the 10 students and Dr. Medhat Abbas, one of the initiators of the education of OTs

---

[1] OT is used as abbreviation for Occupational Therapist and ot is abbreviation for occupational therapy.
[2] One OT in Gaza serves the population of 1.6 million, with 24000 disabled people.
[3] NORAD is the name of the Norwegian Agency for Development Cooperation.

for Gaza. We listened to their thoughts and feelings about their situation and discussed the possibilities to continue the program. Dr. Medhat suggested a solution. Theory could be taught through video-conferences. Foreign OTs could come to Gaza to teach and supervise practical skills. Local medical and social staff inside Gaza could contribute to the program. I asked Dr. Medhat to explain why we should struggle to continue the program under these conditions. He said in a videotaped interview:

> The occupational therapists should come here to teach our student to save the population of 1,2 millions where the main cause of morbidity and mortality are strokes and the other cases who are victims of the intifada due to Israeli aggression. The people are dying here. We want to get them treated inside Gaza. There is no way to travel abroad. It is very costly. We are trying to solve this problem in the long run by having 10 of our Gaza students, studying occupational therapy speciality. There is only one occupational therapist in Gaza which is not enough to solve the problem of 1.2 million populations. In such a situation, the occupational therapist is going to make a very big humanitarian aspect to help the Palestinian people during such a hard time in which we are living and we are dying. It's hard and we try to have normality in our lives. They are going to treat many patients when they are graduated. We are speaking about thousands of patients who are going to be saved, because the rehabilitation cycle is not going to be completed without occupational therapy. We have all the other parts of the rehabilitation excising in Gaza. We have the physicians, we have the nurses and we have the physiotherapist. But occupational therapists are not available and they are badly needed. We are many organisations who try to complete the rehabilitation cycle, but without you, we can never do our mission for the sake of these people.   (El-Wafa Hospital, September 2004, video Ergonet)

The students added: "Please help us, please try to solve this problem by any way". After being in Gaza the whole day, meeting patients, seeing the facilities and talking to the students and people involved, we felt a commitment. We wanted to contribute to solve the problematic situation. We were already involved. Norad provided financial support. NETF had initiated the program and were responsible. The students were in the second year of their study and should not have wasted their time. The population of Gaza needed OTs and several organisations had already offered them employment after graduation. We had to find a way to overcome the political obstacles. During the journey back to Bethlehem, we started making plans to find a solution, to make an action.

2

1.2 The initial actions

It is difficult for Palestinians from the West Bank to enter Gaza. The first problem to be solved was to find a foreign OT willing to go to Gaza to teach and supervise the students. We contacted a colleague with long clinical experience working with rehabilitation in Norway. She agreed to work as an OT teacher in Gaza. Encouraged by the appreciation of the OT program at BU from the employees at the Norwegian Representative Office of the Palestinian Authority, I decided to expand my engagement in the project.

Together with the educators at the OT program at BU we started to work on solutions to continuing the program for the Gaza students while they were waiting to get permission to come to Bethlehem. The OT teachers at BU expressed their need for extra support, both professional and financial. The class was divided in two, one group on campus in Bethlehem and one distance group in Gaza, 6 months behind the BU students. If the Gaza students from the 2003 cohort at BU were to be able to continue their education special measures had to be considered. To be able to teach the isolated Gaza students, the use of flexible forms of learning like video-conferences and the internet had to be implemented. The lack of OT role models in Gaza also emphasised the need for visualising ot by the use of film.

BU had little experience with long distance learning programs. The leadership at BU was initially sceptical about continuing the program in Gaza both from an academic point of view and because of the very unpredictable situation. The teachers told how they were warned: "Everybody was saying, what if the situation changes"? However, the teachers would not give up and enthusiastically worked to get the university to continue the OT program in Gaza: "Well we'll find a way around it. It is really important to do it this and we are committed to the students".

The video from the visit to Gaza was edited and presented together with a financial and professional plan for continuing the program. The Academic Council at BU decided to continue the program. NORAD gave extra financial support. Tromsø University College[4] / University of Tromsø (TU), where I work as an Assistant Professor in OT, supported my

---

[4] This project was mostly done while I was working at Tromsø University College. In 2009 the College emerged with the University of Tromsø.

application by providing time to systematically follow the process. The project was initiated, lasting from 2005-2007.

1.3 Caught in a political conflict

By deciding to admit 10 students from Gaza, the OT program at BU became part of the unstable situation in the Palestine – Israel conflict. It challenged the Israeli strategy of isolating Gaza from the West Bank and preventing Palestinians from crossing Israeli territory. But the use of power will always lead to a lot of resistance according to Foucault (1972). In this case it encouraged students, teachers and health workers together with different organisations to oppose the restrictions, to give support to complete the OT program. Many attempts were made to get the students to Bethlehem, without success. The students did almost the entire 4 year program inside Gaza except for two weeks in the 6th, 7th and 8th semesters. During these six weeks the teachers at BU met the students for practical skills training and exams in Egypt.

The Gaza students' struggle for their OT education soon became both a legal and political matter. In addition to efforts made by BU to fight for the students' right to education, their case proceeded in court several times. This generated publicity through newspapers and television. Students and faculty were interviewed for Israeli television, for TV Al Jazzeera, and by Reuters and Associated Press for distribution internationally. Articles were published in the local papers. The Chronicle for Higher Education addressed the situation of students in Gaza with the article: *Israeli security measures have isolated Palestinians there from outside higher-education opportunities* (Kalmann, 2007). This article gave the OT students important publicity.

In spring 2005 Gisha[5] petitioned the High Court in Israel to allow the group of students to travel to Bethlehem to continue their studies (Gisha). Gisha is an Israeli not-for-profit organization seeking to protect the fundamental rights of Palestinians living in the Occupied Territories by imposing human rights law as a limitation on the behaviour of Israel's military. This case was refused on the grounds that 4 of the students by virtue of their gender, age and place of living, were potential terrorists. Gisha continued to fight for the students' right to

---

[5] Centre for the Legal Protection of Freedom of Movement.

4

travel to Bethlehem to study. Their efforts were supported by organizations in Gaza needing OTs a group of Israeli academics supporting freedom of education. The petition was heard a number of times in the High Court, the most recent being on the 24th July 2007. This last petition was for the students to come to Bethlehem to complete their final clinical placements. A decision announced on the 9th August refused permission for all of the students to travel to Bethlehem. While none of these efforts influenced Israeli decision makers to allow the students to travel to Bethlehem, it gave both the students and the profession much needed publicity both locally and internationally and encouraged them to fight on.

1.4 Piecing together an alternative OT programme for the Gaza students

Adjusting to Israeli restraints, the students started their education inside Gaza by studying related knowledge[6] at the Palestine College of Nursing (2003-2004), the Islamic University (2004 – 2005) and the Al Aqsa University (2006). A Norwegian OT (2004-2005) and the head of the OT program at BU (2005-2006) lectured them inside Gaza. Local health personnel in Gaza taught and supervised them during clinical placements. Subjects like ot, psychology, sociology and management were taught by the use of video-conferences and internet at BU (2005-2007). OT educators from Palestine, Sweden and New Zealand taught the students in Egypt (2006 and 2007).

On the first trip to Egypt in June 2006, all 10 students entered without any problems through the Rafah Checkpoint at the border between Gaza and Egypt. In January 2007 the students travelled again to Cairo for two weeks of intensive teaching in ot skills for working with children. This was a particularly important course because of the large number of children with disabilities and the likelihood that the students would be working in this area following graduation. Since the previous visit in May 2006, the regulations at the Rafah border crossing had changed. This time it became more difficult for some of the students to reach Cairo. However assisted by several invitation letters from organizations in Cairo, they all managed to enter after several attempts. At the end of this course the Rafah crossing was closed and the students had to remain in Cairo until it opened, one week later.

---

[6] Kielhofner (2004) uses the concept "related knowledge" for ot subjects that are in common with other health professionals such as; anatomy, biology, neurology, developmental psychology, sociology etc.

5

The spring semester courses in 2007 were taught by the use of video conference and internet support. The completion of the courses was delayed because the situation in Gaza deteriorated with the conflict between Fatah and Hamas. The 3rd trip to Cairo for completing the theory and skills courses was rescheduled from May to June. Although the situation in Gaza was quite unstable, it was crucial to meet the students because it was difficult to complete the skills course without a face to face meeting with the students to train in practical skills. Since the January trip, the regulations at Rafah had become even more comprehensive and restrictive. Only 5 of the students were allowed to cross for practice in Cairo. When the courses finished on the 13th of June, the Rafah crossing was closed again. The last students eventually arrived home in Gaza the 6th of August.

This story is told to describe the very challenging context this project operated under both for students, OT teachers and other staff involved. The chaotic and unpredictable political and social situation for the Gaza inhabitants has been the context, making extensive challenges from the beginning to the end. However, with combined effort we have been able to find our way around the challenges to complete the education of the Gaza students. This distance learning education has been a pioneer project at BU. We wanted to turn an unfortunate situation into an opportunity for development. In this report I will document this turning process by describing and analysing how we could improve the OT program by means of distance learning methodology including internet support. The project has a dual purpose:

1. To develop and use flexible forms of learning in OT education
2. To document the process of developing as a research project

For the purpose of combining these perspectives we chose an action research approach.

1.5 The initial phase and planning of the project

The research approach had to be flexible enough to follow the process of developing and using flexible forms of learning where we could continuously integrate knowledge from the research process. We wanted to systematically reflect and learn through this process. The overall goal has been to support the Gaza students to fulfil their education. We wanted to develop teaching material and integrate new ways of thinking and planning useful, not only for the Gaza students, but also for current and future OT programs at BU. Carr and Kemmis (1986) state that research should be used to make praxis better. In this project action research

is a strategy, chosen for problem-solving, to enhance the learning process and produce knowledge about constructive processes of change.

Reflective practice can be formally encouraged and directed as *action research* (Elliott, 1991). This action research is directed towards being systematic about how teaching changes, and making sure that the changes are in the right direction. It focuses on learning about oneself as an educator, and reflection on experience of how to become a better educator. Kalleberg (1996) uses the concept *professional* to mark that this is another activity going on in addition to the research. The professional person, in addition to being research educated, also uses his professional knowledge. In this case I have experience from research, from clinical work and teaching in ot. As a professional I am using my knowledge to develop or improve what has been decided within the group. In this project this means gaining experience from developing and using flexible forms of learning like films, videoconferences and the internet in teaching and learning ot.

We have implemented a *professional project* for the OT teachers to develop and use flexible forms of learning and learn from the impact it will have on obtaining practical knowledge in ot among the students. Several actions will be described, reflected on and evaluated for the purpose of improving teaching and students learning process. An *action research project* will follow up and promote the process, analysing the changes and the pedagogical and cultural implication on the content. Both projects are melting together, making an impact on each other as the project proceeds (Brekke & Tiller, 2007).

Three OTs from Palestine (P), Sweden (S) and New Zealand (NZ) have participated in the professional action research project. They all have experience from clinical work in Palestine and have been involved in teaching both the on-campus and the off-campus students. In addition OT clinicians from Norway and Palestine have been involved in developing the professional content of Ergonet. The students in Bethlehem and Gaza played a third part role in this project contributing with their experience from using the flexible learning tools. Common classroom education for both students groups using video-conference was arranged for the first time in 2006.

Participating both in the professional actions and at the same time doing the research has some implication. As the one responsible for the research process, it has been important for

7

me to be aware of my different roles during the 3 years of this project. Initially I started the professional process by finding and developing flexible forms of learning tools. After the first year the head of the OT programme became responsible for this professional part in cooperation with the Palestinian OT teachers at BU. My role became more directed towards implementing, leading and documenting the research process. The process of balancing different roles is further described in chapter 3.

The local teachers expressed their need for extra support, both professional and financial. It was necessary to make films and an internet supported program that could compensate for the lack of teachers and clinical supervisors, not least the lack of OT's as role models inside Gaza. It became important to focus on how to facilitate practical knowledge among the students. Flexible forms of learning tools like video, video-conferences and the internet had to be used in teaching and learning supporting the students to complete their study. The material developed was also used among BU campus students. The main goal in this project is to:

Develop and use flexible forms of learning to facilitate practical knowledge in the education of Occupational Therapists in Palestine.

In the initial phase of the project we had to explore and obtain knowledge related to the use of ECT[7], both technical and professional. We wanted to find a way to use the internet to make lectures and visualise ot. Questions related to technical issues occurred: What is technologically possible? Is the internet speed in Bethlehem and Gaza adequate? What kind of competence do we need to develop for using ECT? Computer technicians at TU and at the Digital Media Centre at BU have been very supportive in this process. They provided courses in making and editing photos and films, using PowerPoint in teaching and MindManager[8] in planning. Most impressive and interesting in meeting our professional and pedagogical goals, has been the internet based program *The Learning-net*[9]. This software program was developed by Professor Britt Kroepelien, for the internet based study in History of Art at the University of Bergen. She initially gave support, supervision and permission to use the Learning-net. The program was also developed to a *Physio-net* in an off campus program at TU by Britt-Vigdis Ekeli and Marianne Års (Aars, 2006). These two programs and the previous mentioned names have supported and inspired us to develop an *Ergonet* for the OT education. The intentions for

---

[7] ECT is shortcut for Educative Computer Technology.
[8] The software program MindManager is a visual tool for brainstorming and planning: http://www.mindjet.com
[9] The original name in Norwegian is læringsnett.

developing Ergonet will documented by exploring the teachers experiences of teaching practical knowledge for both students at campus and of campus, in addition to their experience of implementing Ergonet in teaching.

1.6 The focus of the Action Research

The goal for the project is to **develop and use flexible forms of learning to facilitate practical knowledge in the education of Occupational Therapists in Palestine.** Focus is set on the OT teachers' experience from implementing flexible forms of learning tools in teaching. The action research project will follow the tracks and find important highlights that influence learning and changes. We want to work systematically, developing these tools and learn from this process of using it and what kind of impact it will have. The questions for the Action Research are:

4. **How do the teachers experience the teaching process of facilitating practical knowledge?**
5. **How can an internet support program be developed to facilitate practical knowledge in OT education?**
6. **How do the teachers evaluate the outcome of implementing flexible forms of learning, in regard to the students practical skills?**

Flexible learning is the provision of learning in a flexible manner, built around the geographic, social and time constraints of individual learners, rather than those of an educational institution. Flexible learning may include distance education, but also deliver face-to-face training in practice. Like distance education, flexible learning is more a method than a philosophy, although like distance education, it is often associated with increased access and hence more openness (Bates, 2005). E-learning is a similar concept used in this text. It is defined by Garrison & Anderson(2003, p. 2) as: *networked, on-line learning that take place in a formal context and use a range of multimedia technology*.

Flexible forms of learning in this project will be the use of digital tools like video-conferences, internet, Ergonet and film. Similar concepts that will be used in this text are educational technology (ECT). Garrison&Anderson (2003, p. 34) define ECT as: *those tools used in formal education practice to disseminate, illustrate, communicate, or immerse learners and teachers in activities purposively designed to include learning*.

9

What is practical knowledge? How can it be described and observed? What is important? Practical knowledge is described by many theoreticians (Aristoteles & Stigen, 1973; Molander, 1996; Polanyi, 1983; Schön, 1987; Wittgenstein, 1967). The knowing-in-action perspective is grounded in the living tradition, founded on dialogue and participation. It originates from the questions to be answered and tasks to be completed within different human occupations. Practical knowledge is understood as a unit of different aspects of learning combining factual knowledge and practical skills (Molander, 1996) together with cognitive, thinking skills as problemsolving, including clinical and ethical reasoning (Creek, 2007; Creek & Lawson-Porter, 2007; Mattingly & Fleming, 1994; Polanyi, 1983)

Practical knowledge is a wide and comprehensive concept needed to be filled with content. We are going to explore it theoretically and empirically based on the teachers experience from clinical and educational work in Palestine. In the process of changing learning strategies it is initially important to understand the challenges that the teachers have experienced promoting practical knowledge in the education program. Their experience will be presented and used in the action research project during the process of developing and using flexible learning material such as educational films, evaluation films and Ergonet. The analytic perspective will reflect on pedagogical knowledge that can help to understand our pedagogical thinking, understanding and planning to make sure that the changes go in the right directions. I will shortly give an overview of the content of this text.

1.7 To be followed

The rationale for this project, the specific context, some implications and what we wanted to achieve through this action research project has been presented. The content is briefly presented to guide the reader as to what will follow.

Chapter 2 presents background knowledge related to pedagogical aspects concerning the development of practical knowledge in OT. When creating an e-learning experience there are many features to be considered and we have to rethink our pedagogy. The learning theories which are presented emphasise experience based and situated learning acknowledging the influence of organisation and the learning environment. Theories on deep and surface approaches to learning and transformative learning are relevant for understanding the challenges experienced in this project. The action research design is presented in chapter 3.

This includes the reasons for choosing action research, the methodology and theoretical perspectives, the research process, ethical considerations, methods and analysis used for this specific project.

The empirical material will be presented in chapter 4- 7 together with analytic and theoretical perspectives. Chapter 4 presents the teachers' reflections on pedagogical challenges in teaching practical knowledge to OT students in the Palestinian culture. Their reflections have an impact on the way flexible forms of learning were developed and used in teaching. Chapter 5 presents teachers' experience in teaching the same practical skills course for both Gaza and Bethlehem students. Emphasis will be put on the changing process that the development and use of flexible learning forms represents. Chapter 6 presents and discusses experience and choices made in the process of developing Ergonet and how the technical, professional and pedagogical experiences had an impact on choices made. Ergonet was implemented in teaching for the Gaza students in their last semester. The way it was used didactically to facilitate practical learning processes for the Gaza students is presented in chapter 7. Finally chapter 8 gives a summary from our experiences of what has been important in this process and where the future will take us.

2. THEORETICAL PRECONDITIONS/PERSPECTIVES

The aim of presenting theoretical perspectives is to develop knowledge related to the teachers' experiences in using flexible forms of learning in teaching practical knowledge. Our vision is to describe a process that departs from a more traditional pedagogical view in the learning perspective of *knowing that* to a more comprehensive and practical oriented perspective of *knowing how and knowing from within the situations* (Nortvedt & Grimen, 2004, p. 165). In this process it is important to be aware of the cultural traditions which dominate education in Palestine. The learners and teachers are influenced by their experiences, expectations, values and beliefs, representing the context and not easily changed.

The learning environment, as well as the learners' motivation and sense of decorum, influence the learning process. Knowledge of learning theories is helpful in the process of understanding how these theories influence teaching and learning practice. As teachers we have to broaden our perspectives to understand the implications deriving from our teaching and the students learning and how these can be changed. Reflection is a key concept in the process of developing practical knowledge. As Schön (1987) points out, both teachers and students need to become reflective practitioners. In the process of facilitating practical knowledge, we need to understand learning from different perspectives. Cultural, social, political, professional, philosophical, pedagogical and didactic aspects have an impact. We also need to consider the teaching potential and challenges when using e-learning / flexible forms of learning.

2.1 Flexible forms of learning

It is important to consider how to facilitate practical knowledge among OT students in Palestine using flexible forms of learning. *Creating an e-learning experience involves a serious commitment for understanding the very different features of this medium and the way it can be used most advantageously to impact learning* (Garrison & Anderson, 2003, p. 3). To realise the potential of e-learning as an open, but cohesive system, we need to rethink our pedagogy. E-learning's transformative power and capacity to add value is not based upon access only, because today we get far greater access to information than we can manage.

What e-learning offers, are better ways to process, to make sense of, and recreate this information (Garrison & Anderson, 2003).

Research and knowledge related to E-learning is mostly linked to distance learning literature. There are few distinctions made between distance education and other traditional higher education programs. Many studies have been made, but they are more like descriptive reports, rather than analytic research. Most of the best work has been done as single case studies at different levels or in the classroom. The E-learning research is blending because different e-learning methods have been used at the same time without distinction.

Brey et al. (2007) describe five barriers existing for faculty in designing and/or teaching distance educational courses. These are promotion, tenure considerations and compensation, workload and release time, intellectual property rights and technological reliability. When e-learning is to be implemented in distance learning, making priorities of planning and structure is highly recommended. The workload has to be considered because extra time for training, planning and developing the courses and accompanying materials is needed. Policy for Intellectual Property Rights has to be determined when making educational tools, like videos and analytic text in the internet program Ergonet. We have to ask; who is the owner of the material made? In this project there are many actors involved; teachers and clinical OTs and several institutions like BU, TU, NETF or NORAD. Clarification to demark the difference between the courseware and the course content is recommended. The faculty is the ones engaged in providing the course content, while material to produce and disseminate the course are typically provided by the institution. It takes extra time to learn new technology and lack of competence is a barrier to teachers' motivation. Bray also points out the importance of ensuring technological success. Unfortunately technological problems, particularly reliability issues, still pose a real obstacle to E-learning. Adequate equipment, both soft-ware and hard-ware, are critical components of the adaptation and use of technology. In traditional classrooms, alternatives exist when technology does not work. In distance education it becomes fatal. Students will face isolation (Bray, 2007).

E-learning transformative power and capacity to add value is not based upon access since we have greater access than we can manage[10]. The dominant issue in education today is to make

---

[10] Electricity instability and low internet speed also have an impact on access for the Gaza students.

sense of the quality of the material we are exposed to. This is a challenge for students, but it is possible to meaningfully assimilate all the information. E-learning offers a better way to process, to make sense of, and recreate this information. The goal is to give the students the abilities and strategies required to manage this overwhelming breadth and depth of information by constructing a learning environment where the students can learn to learn. This demands a shift to the development of critical thinking and self-directed learning abilities serving the individual over a lifetime. The interactive and constructive potential of e-learning contrast with the passive information transfer approaches (Garrison & Anderson, 2003).

The distance learning students seem to be more mature than on campus students. They are often high class and know what they want from education (Bray, 2007). Research indicates that the Classroom seems to be the strongest link for the students, not only in an academic way, but also sociologically and psychologically. Student satisfaction is higher in these face-to-face classes. The traditional classroom provides learning benefits that distance courses can not match. Students perform better on the most complex material than their distance delivery peers (Brown, 2002). But other research finds no difference, while other indicates a positive difference indicating higher quality work from the on-line section.

Mary K Tallet et al. (2006) researched teaching courses on-line. They refer to Clark (1983, 2001) who earlier suggested that the medium of delivery was not the key difference in higher education course delivery – the methods were. Using this medium, it is important to find the key to success for distance students is to participate in active learning. Only active interaction is a significant indicator of an online student's perception of their learning. This is important since Kanuka (2001) found that students' greatest frustration came from pedagogical issues rather than technical ones. It seems that it is the pedagogy rather than the delivery methods that is the most important for students learning and growth.

Education has to build a community of inquiry where students listen to one another with respect, build on each other's ideas and challenge one another to supply reasons for otherwise unsupported opinions. Garrison & Anderson (2003, pp. 28,29) list three key elements of inquiry in a community to be considered when planning and delivering an e-learning experience: These are cognitive presence, social presence and teaching presence. *Cognitive presence* is seen as "the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse in a critical community of inquiry". It is related to

reflective (Dewey) and critical thinking, to construct meaning and confirm understanding. *Social presence* is "the ability of participants in a community of inquiry to protect themselves socially and emotionally, as "real" people (i.e., their full personality) through the medium of communication being used". Lack of non-verbal communication using the Web makes a challenge. This is because written communication is missing a sense of immediacy that enhances closeness to and non-verbal interaction with others. Immediacy is important in a supportive and secure learning environment, because it reduces personal risk and increases acceptance. Cognitive presence is enhanced and sustained when social presence is established. But social-emotional communication in text-based communication is possible through the use of compensating strategies, such as adaptation of textual behaviour to reveal social and relational messages. Attention must be given to establish and sustain appropriate social presence if the full potential of e-learning is to be realised. *Teaching presence* is defined as "the design, facilitation and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes". Balancing between the intended outcome and the needs and capabilities of the learners is important. The teacher must also be a facilitator who models critical discourses and reflections by constructively critiquing contributions.

Garrison&Anderson (2003) describe the development of several generations of distance education. It is not related to time, but more to perspectives on learning. In the first generation behavioural approaches are implemented. In the second, collaboration and efforts are made to produce DVD-disks and CDs. These attempts have been less than successful. The cost of such enhancement is high, and the skills required to produce these educational objects are usually beyond those of typical teachers. Classfronter and Moodle are examples of the 3rd generation of tools provided. They take advantage of the capacity for both asynchronous and synchronous human interaction provided by a variety of telecommunications technology – notable audio, video and computers mediated conferencing. The net continues to expand its capacity to deliver all modes of human communication in both an asynchronous and synchronous mode. This generation distance-education system embraced constructivist learning theories to create opportunities for the students to create and re-create knowledge, both as individuals and as members of learning groups. This knowledge construction takes place within negotiation of content, assignments and projects and is elaborated on in the discussion of collaborative projects.

15

The videoconferences and discussion groups on the internet are a synchronous way of learning based on an immediate contact between learner and teacher. E-mails and Ergonet is asynchronous, not having contact at the same time. The difference in nature between spoken and written communication is, in fact, a key to understanding the effective use of computer-mediated communication. Face-to-face discussion is generally less systematic, more exploratory, and less alternative to others view. The films and written text have an advantage that it is permanent recorded. Wells (1999) claims that the written word serves best to mediate recalling and reflection, while the spoken word functions most effectively in mediating action. Blanchette (2001) found in his study of questioning and cognitive function that the interaction in this on-line context was more intellectually demanding than found in face to face. The question and response was more on a higher level than face to face verbal context. This might be due to the asynchronous nature of written communication. It would appear that students have more time to reflect, to be more explicit and to order context and issues, and teachers were able to ask higher-level written cognitive questions.

2.2 The educational system in Palestine

When the students enter the OT programme at BU, they have been through many years of primary and high school. Basic knowledge and learning strategies have been established. The educational system, serving Palestine since 1517A.D meets tremendous challenges today. Cultural perspectives and philosophy in curricula and books have until recently been dominated by foreign countries like Israel, Jordan and Egypt. After the Oslo agreement in 1993, Palestinians were given control of their own educational interest and got the opportunity to develop an educational system based on their own cultural values, history and daily life (Blair & Randall, 2002).

Blair and Randall (2002) show in their studies among leading Palestinian headmasters in primary school, four major barriers that interfere with the inculcation of core values in education. These are: the absence of a guiding philosophy of education, poorly trained teachers, political obstacles and economical factors. The Curriculums are often inappropriate to Palestinian Culture, representing Egyptian and Jordanian culture. Lack of Palestinian philosophy in education makes for unclear objectives and aims and major problems in all levels of schooling. The knowledge in most textbooks in Palestinian Education is based on other cultural perspectives. This results in the ignoring of Palestinian culture, values, identity

and aspiration (Pacetti, 2008; Wahbeh, 2000). This lack of core values and the fact that most ot professional books are in English and based on western ideals, makes it important to pay attention to culture, therapeutic values and attitudes.

Teaching is traditionally performed in the classroom with more than 40 pupils present. The quality of teaching is poor. The system is hierarchical and the role of the teacher is to be the expert. Evaluation and exams measure factual knowledge and the students are supposed to use surface approaches in learning, like memorising. Deep approaches in learning such as reflection and problem solving skills are not required. Practical skills cannot be learned only by the use of memorising.

The role of the traditional teacher is described as a barrier to learning, because they can not lift the students up to a higher level of aspiration, self-reliance, creativity and empowerment. But the classroom contains more than 40 pupils, the salary is too low, so the teachers often need extra work to support their family. The motivation for doing a good job as a teacher is therefore not very high. One of the educators in their study describes it this way:

> More than 50% of our teachers (and principals) treat our pupils harshly. There is no interaction. There is no love between them. This is the problem. This harsh treatment results from a philosophy stance that pupils are little more than receptacles designed to receive transmitted knowledge.
>
> (Blair & Randall, 2002, p. 25)

John Biggs (2003) refers to learning-related problems that are seen as *cultural in origin*, such as reliance on rote-learning, passivity, teacher dependency, lack of creativity and problem-solving. These could also be referred as Low-level engagement. He refers to studies by Ballars and Clanchy (1997) and Harris (1997) who claim that these perceived problems arise with international students from non-Anglo-Celtic cultures like Africa, the Middle-East or Far Eastern countries. Their studies show that international students from these countries are too teacher-dependent, too uncritical of the material they have been taught and prone to rote-memorisation. Biggs points out that instead of making stereotypes, it is useful to ask if these problems emerge when the students come from a more passive, protective culture of secondary school, to a more academic culture of university. Many students find bridging these two cultures difficult. Good teaching is to get all students to use the highest level of engagement where they explain, relate, apply and theorize. Biggs (2003, p. 5) uses a continuum starting with low-level engagement developing to high-level engagement learning

strategies: memorising- note-taking- describing- explanation- relating- applying- theorizing. Practical teaching is usable to facilitate high level engagement. Problem based learning (PBL) is acknowledged as a learning strategy that can enhance deep learning and stimulate students to become more practical which concedes with my experience as a teacher in Norway. However, due to the specific pedagogical cultural conditions, introducing such a strategy was found too challenging for all participants, as well as inappropriate of "imperialistic" reasons. We therefore had to find another strategy to meet the demands of teacher-student separation in facilitating practical knowledge.

2.3 Different perspectives of knowledge building

I will further present learning theory perspectives important for this project. The behavioural orientation emphasising environmental approaches is relevant because this is strongly grounded in Palestinian culture. The opposite is the humanistic orientation emphasising the individual person and this is strongly grounded in ot. Situated and experienced based learning is highly relevant for facilitation of knowledge in practice. When constructing knowledge in adult learning, the meaning given to the experience is important.

Learning theories are originally philosophically based. Greek philosophers like Plato and Aristotle still influence our understanding of the nature of knowledge, the human mind and what it means to know. Plato has inspired gestalt and cognitive psychology. We can come to know *by reflecting on the contents of one's mind*. Early behavioural psychology has been inspired by Aristotle. He believed that all knowledge comes through the senses. Together with Descartes' *separation of body and mind*, several theoreticians present variations of these (Merriam & Caffarella, 1999, p. 248). Learning is defined in many ways, but most definitions include the concept of behaviour change and experience. Explanations of what happens are called learning theories. The theories help us to direct our attention. They provide us with concepts helping us to interpret the example of learning observed (Merriam 1999).

The students who attend the OT program are familiar with and expert at using memorising in learning. They are familiar with a behaviourist orientation in learning. According to Merriam & Cafarella (1999, p. 264), this orientation is developed by theoreticians like Guthrie, Hull, Pawlow, Skinner, Thorndike, Tolman and Watson. It is the most dominating theory in education all over the world (Hermansen, 2006). This view of learning assumes that observed

behaviour is the focus of learning, not internal thoughts. The behaviour is shaped and changed by stimuli or elements in the environment, not by the learner. Timing and repetitions is of importance. The teacher's role is to design an environment that elicits desired behaviour. Examples of how this theory can be implemented in education is computer assisted instruction, and core ot knowledge like activity analysis and skill training. Evaluations are objective and quantitatively measured (Barris, Kielhofner, & Watts, 1988; Merriam & Caffarella, 1999). According to Barris et al. (1988), OTs working within a behaviourist-based context will feel lost because it interferes with their core values. These are more close to existential and humanistic philosophy, more clientcentred and holistic.

The humanistic tradition is totally different from the behaviourist tradition (Barris et al., 1988; Merriam & Caffarella, 1999). It is strongly linked to core values for therapy and teaching among OTs' worldwide. Theoreticians like Rogers and Maslow who developed this view of learning, emphasise that perception is centred in experience. Focus is set on the individual. Motivation is intrinsic, emanating from the learner. A person is free and responsible to become what one is capable of becoming. Self-actualisation is of major concern and learning facilitates development of the whole person. The teacher acts as supervisor facilitation the learning process, more than the product.

Self-actualisation is developed when basic needs like safety and hunger are met. Valuing experience and self-directive learning gives the student a big responsibility. Humanistic values and human rights are founded in democratic societies where people from childhood are used to and expected to ague and state their needs and opinions. The critical question to be asked is if and how it is impossible to implement this orientation in Palestine? This is due to the challenges described in the political and education system in Palestine together with the traumatic human condition from which the population suffers.

Education and teaching mostly emphasise factual knowledge. Molander (1996) describes this as knowledge about something. Objects are separated from the subject and knowledge is separated from action, you don't need to use it. In contrast to this tradition is the practical knowledge funded on participation and dialogue with people. Tools and materials are integrated in living. It is knowledge about knowing-in-action. This perspective of knowledge is grounded in the living tradition. It appears from questions to be answered and tasks to be completed within different human occupations.

19

Understanding construction of learning based on experience is important to facilitate practical knowledge. The constructivism orientation is developed by Candy, Dewey, Lave, Piaget, Rogoff, von Glasefeld, Vygotsky, according to Merriam & Cafarella (1999). It posits that learners construct their own knowledge based on their experience. A basic value in the learning process is construction of meaning. Meaning is based on experience and created through interaction between teachers and learners. It occurs in the process when individuals are introduced to a culture with more skilled members. Constructivism manifested in adult learning has an experiential orientation, a self-directed learning and a reflective practice.

2.4 Situations and experience constructed learning

Dewey is the grand father of experienced learning. His concept of reflection has inspired reflection theory developers like Schön (1987) and Mezirow (2000b). Dewey postulates: *all genuine education comes about through experience* but some experience *mis-educates*, *distorts growth and narrows the field of further experience* (1938: p.13). The learners own experience is the highest valued resource in adult learning. Teacher and supervisor have to find the right material for learning which is to be provided and linked to the learner's past and future experience. Continuity and interaction, a welcoming and comfortable atmosphere, are critical aspects in assisting adults to learn from their experience (Merriam & Caffarella, 1999). The context for the students in Gaza is not optimal for making these frames of structure and safety which are so important for learning from experience. They live in a politically conflicted area. They are exposed to traumatic stress in their everyday living. They lack physical continuity and interaction with the teacher. They have little access to observe, be guided and supervised by experienced OTs.

The OT Jennifer Creek (2007) describes a set of core skills utilising the practice of OTs. Occupational therapy focuses on promoting health, well-being and function by analysing, selecting, synthesising, adapting, grading and applying activities for specific therapeutic purposes. The students have to learn how to build collaborative relationships with clients that will promote reflection, autonomy and engagement in the therapeutic process. They have to enable people to explore, achieve and maintaining balance in their occupations in the area of personal care, domestic life, leisure and productivity.

Practical knowledge is understood as a unit of different aspects of learning combining factual knowledge and practical skills (Molander, 1996) together with cognitive, thinking skills as problemsolving, and including clinical and ethical reasoning (Creek, 2007; Creek & Lawson-Porter, 2007; Mattingly & Fleming, 1994; Polanyi, 1983) OT students learn practical knowledge through:

1. Practice and skill training. The OT student has to practice and train in different techniques used in assessment and therapy, such as teaching a stroke-patient to transfer independently from bed to wheelchair.

2. Occupational based language, discussion and reflection on how to use techniques and practice, thereby developing a language belonging to the profession and integrating theoretical knowledge and understanding to build explanations for what is happening. This process includes mental actions in framing problems and working out the best solutions using clinical and ethical reasoning, reflection and analysing.

3. Creating a professional identity. Personal performance in practice building on the OT tradition is influenced by its masters, stories and memories.

Situated and experienced based knowledge occurs through practicing. Working together with experienced OTs is of high importance, something the Gaza students are missing. The teachers have to reflect on and question their learning perspective. How can practical skills be learned? How can the students get experience and develop professional knowledge? How can the fieldwork in Gaza be adapted meeting the students learning needs? What kinds of processes are important for the students? What responsibility belongs to the students, to the teachers and what is mutual responsibility? Theory related to apprenticeship or master-learning, to experienced and situated learning, is helpful to understand important aspect for constructing knowledge and learning practical skills. These traditions focus on learning by doing.

It is obvious that fellowship of practice among OTs and students is the most important arena for learning practical knowledge. In this context they can learn techniques and skills by watching and be guided in their action by more experienced OTs, the masters. The tradition of Master-learning theory represented by Lave and Wenger (1991) is central in situated learning. Like Molander (1996) they criticised the top-down, abstract and instrumental learning of theory, factual knowledge separated from practice. They claim that learning is situated in practice and learned in various ways through observation, imitation, identification, by training

and listening to the good clinical story. The professional quality of the staff, determines the quality of learning. In this tradition the master obtains the correct knowledge and values from which the students have to imitate and learn (Kvale & Nielsen, 1999).

Acquisition of skills is learned in different contexts through observation, imitation and supervision, by several masters and by meeting many, and the correct patients. The Dreyfus brothers (1986) describe the process of skill learning in a 5 stage hierarchy. Herbert Dreyfus (2001) expanded it to 7 including skill learning on the internet:

1. The novice performer can learn few, simple elements of a task by rules. Focus is on the technical performance and the learning is context free. It can be learned in the classroom and through the internet.

2. The advanced beginner uses the rules learned from a practical situation, but is not able to modify the rules to other situations. The visions, impressions and information related to the patients seem overwhelming.

3. The competent performer masters the rules, notices many different elements central in action and can reflect and evaluate his/her performance, but has problems finding better solutions. The teacher must help the student to make a plan, make priorities and modify and use the rules. Most students finish at this level when they have learned to evaluate own actions.

4. The proficient performer has engagement, an overview of the situation and ability to reflect on her/his actions and know how to reach the goals. Since the reality is more complex than is possible to read in books, reflection follows actions. Reflection on practical knowledge is related to experience from several similar situations.

Students rarely enter stage 5-7, referring to expertise, mastery and practical wisdom. The graduates can reach these stages by participating, reflecting on and taking the result to heart. *Without involvement and presence we can not acquire skills* (Dreyfus, 2001, p. 7). Dreyfus asks critically if and how skills can be learned on the internet, because they presuppose involvement in situations and embodied competence. Technology takes bodily engagement away. If the body can not be a part of the learning process, relevance, skills, reality and meaning will fade away.

Practical knowledge is facilitated when the students are given the possibility to actively participate in different companionship of praxis. Experienced, situated and master-learning

tradition focus on learning by doing by repetitions, many repetitions. But can a critical attitude in performing ot be ensured through learning from the master? Hermansen (2006) criticises master-learning theories for focusing on the learning context, not the learning process. He claims that learning occurs inside the person, but occurs in specific contexts, social connections or rooms. It is important to reflect on the ways in which different contexts influence therapy and critically examine if your knowledge is sufficient for the situation.

2.5 Deep or surface approach in learning

Teachers need knowledge about how students learn in order to create stimulating learning activities. The important constructivism question is: What has the learner to do to create knowledge? Knowledge is created by the student's learning activities. Marton & Booth (1997) describes two distinct levels of processing information, the surface- and the deep-level.

The deep approach arises from a felt need to engage in the task of learning appropriately and meaningfully. The students try using the most appropriate activity for handling it. When the students feel a need to know, they automatic try to focus on meaning, or main ideas, themes, principles or successful applications. Positive feelings occur like interests, a sense of importance, challenge, even of exhilaration. Learning becomes a pleasure related to Marton (in Biggs, 2003).

The surface approach arises from an intention to get the task out of the way with minimum trouble while appearing to meet the course requirement. Examples are rote learning selected content instead of understanding it, listing to points instead of writing arguments, copying from the internet and presenting it as your knowledge. Memorising does not always indicate surface learning, sometimes it is appropriate. OT students have to memorise the bones and muscles in the body and how they function. However memorising becomes surface learning when you give the impression that you understand something you just are describing. One of the teachers exemplifies the difference by referring to a person interviewed for attending the OT program. He gave an impressive 7 minute answer to the question: What is ot? However, the words were an exactly copy from the WFOT[11] website. The person had no idea of the meaning of the concepts being used.

---

[11] World Federation of Occupational Therapists

In the surface approach the students focus on what Marton &Booth (1997) calls *the signs of learning*; the words used, the isolated facts, items treated independently of each other. This prevents them from seeing what the signs signify, the meaning and the structure of what is thought. This information might become overwhelming; you cannot see the woods for all the trees. Emotionally, learning becomes a drag, a task to be got out of the way. Exhilaration or enjoyment of the task is not part of the surface approach. The problem with this surface approach is that it often works; you get good marks. If some teachers expect OT students to use surface approaches and others a deep approach this might confuse the students.

The context is important for establishing frames supporting professional and social development. Time, safety and openness have to be given within a context where the participants freely can explore and examine dilemmas and reflect on possibly new understanding and action. This includes the ability to listen, to ask questions, to be open for the experiences of others, their understanding and assumptions, to be empathetic. In all learning environments resistance to learning will occur. The learning environment needs structure and guidelines and formal authority has to be established.

To establish formal authority, an asymmetry in knowledge and competence has to be approved (Dale, 2000). If the authority is missing, indulgence might become a survival strategy for the teacher. Teaching might be performed without didactic reflections and in the worst case become pathological. Students' understanding of studying can disperse and disappear. Learning is not always in a flow or in a forward process for every human being during the lifespan. This might be due to the students' motivation or/and aspects in the environment. Resistance can be seen as a strong force in learning. It is important to let the situations room students' resistance, but it has to be heard and met to be overcome and to move forward. There are obstructions not easily overcome that decrease the development of knowledge. Companionship and communication among students and teachers is important. For the students, living isolated in Gaza, physically separated from their peer students and teachers, their resistance can be even harder to deal with. It is important to make sure that student's resistance does not end in non-learning, where the learning processes, qualifications, competence or learning environment is not promoted.

Jarvis (1995) divides non-learning in 3 categories; presumption, non-consideration and rejection. *Presumption* prevents you from noticing new learning opportunities thinking your

knowledge is enough and sufficient. You do not need to stop and examine if your experience is adequate every time a new situation occur. An example of presumption is when students say: Yes, I know it. You just do it this way. *Non-consideration* is thinking like: I am used to doing things this way, and I am going to continue with that. *Rejection* means that: I will not learn something new in a particular context. There are opportunities to learn from situations, but you do not use it. Students are saying: This is too much, this is unfair. The process of reflection is a way to avoid these pitfalls. To improve practical knowledge, new and old knowledge have to be combined. Consciousness related to the process of problem solving, choices and evaluation of therapeutic actions, might improve therapeutic action.

The students at the OT program have to change their habitual learning strategy going from rote learning into a deep approach by using higher cognitive skills. Factual and experienced based knowledge are to be tied together and integrated in action, followed by reflection and problemsolving. The students have to develop their ability for critical self-reflection, evaluation of knowledge, and cooperation skills. Good teaching is to get all the students to use these higher cognitive skills. To improve teaching you have to reflect and learn from each significant experience, particularly from failures, according to Biggs (2003). Organisation of teaching has to be based on a didactic perspective, a reflective and conscious way of thinking. The OT teachers have to ask themselves questions like: What is my perspective on learning? What kind of process is important for the students? What goal has to be achieved through the learning process? What is my responsibility and what is the students' responsibility? Reflection is needed for the single teacher to develop personal experience in learning. This includes engagement in both intellectual and emotional activities. For the teacher reflection is double. You have to reflect on your own practice – and the students practice.

These intentions and approaches to learning are greatly influenced by the educational environment. The students will adapt to the expectations and characteristics of the context under the immediate influence of the educator. The mechanism is that context strongly influence students' perception of learning tasks and, therefore, the strategies they adopt in approaching learning (Garrison & Anderson, 2003, p. 16). Ramsden (1988) argues that it is three domains that influence perception and subsequent approaches to learning. These are assessment, curriculum and teaching. How students are being assessed sends a very strong signal as to what is important for students and how they should approach learning. If the information system is information recall, then the students will, rationally, prepare for "recall

of factual knowledge. An important condition congruent with a deep approach to learning is greater freedom to choose content (Garrison & Anderson, 2003).

Scardamalia (2008) found through her study that students become confused when teachers are acting differently to a groups' collective responsibility. This means conditions in which responsibility for the success of a group effort is distributed across all members rather than being concentrated in the leader. In a discursive, reflective practice, the students need coaching and mutual support. Small group learning is required. Scardamalia (2008, p. 8) states that:

> Knowledge building pedagogy is to engage students in the collaborative solutions of knowledge problems, in such a way that responsibility for the success of the effort is shared by the students and teacher instead of being borne by the teacher alone.

Teaching has to facilitate cooperation and collective responsibility. Both students have to understand how professional competence is to be developed both individual and as a group.

> Creating a shared understanding is simply a different task than exchanging information. It is the difference between being deeply involved in a conversation and lecturing in a group. The word is different, the tone is different, the attitude is different, and the tools are different.
>
> <div align="right">(Schrage, 1989:5 in Garrison and Anderson).</div>

2.6 Developing professional competence

Through the lifespan people are provided with a personal sense of decorum. It is developed when our behaviour is exposed to responses given in different circumstances. These experiences are created by the society and are saved in-body as habitus, conceptualised by Bourdieu (1992; 1990; 1992). We bring our in-body experience into new circumstances. They influence our interpretations and understanding of different situations. Personal sense of decorum, developed through upbringing, has to be integrated with the professional sense of decorum to become a competent OT. Attitudes, knowledge and skills desirable to become a professional therapist must be an integrated part. For this to happen, situations are needed where these habits can be embodied or incorporated.

Sense of decorum can be divided in two dimensions, the material – and the formal. The material sense of decorum is founded on the thesis that learning is created by meeting correct

professional elements. The students have to meet the right patients and therapists and required reading is emphasised. The professional issues, which are known by the teacher, are of main concern. The formal sense of decorum is founded on the thesis that learning is personally developed. Teaching is adjusted to students' interests and resources. Individual and independent competence is emphasised and developed through good working methods and habits. Professional competence presupposes an integration of both dimensions (Klafki, 2001) Practical knowledge is not obtained through a reproduction of quantitative knowledge, skills or ability. By providing selected examples, and going indebt in these, the student can obtain basic and universal knowledge, skills and attitude that is usable in different contexts. The professional sense of decorum in learning emphasises independence in obtaining more skills, knowledge and attitude. Problem-based learning can be defined in this tradition.

Professional competence in ot demands sensibility, reflection and the ability of problemsolving. Self-awareness is a vital part of professional knowledge. The development of self-awareness and insight enables professionals to be aware of their own assumptions about human behaviour, to be aware of how their values and attitudes impact interaction. This awareness helps them to be more open, sensitive and accepting towards the needs of others. Self-reflection is important for developing self-awareness. Significant in self-reflection is the ability of role-distance according to Goffman (in Alve, 2006). Through social meetings, developed from childhood, the person learns to separate between different roles and self. Role-distance shows the distinction between a situated, personal way of interaction and -a professional skilled interaction used in a medical and pedagogical thinking.

When a persons' ability to engage in activity and society is impaired by health conditions or by circumstances, the OT assists him to gain, maintain, improve or regain the skills to support everyday life (WHO, cited inCreek & Lawson-Porter, 2007, p. 3). During a professional education at Bachelor level the students have to obtain basic practical knowledge to practice independently after graduation. Knowledge is constantly expanding and changing, demanding discussions and legitimisation. The students need to develop the ability to ask relevant and sensible questions about their actions. Action and the ability to solve problems and implement meaningful and appropriate actions are essential in the treatment of patients. It is combined with reflection and supported by theory and research. Curiosity and problem solving is part of action and human life. Through the process of problem solving you have to go behind the

obvious problem. You have to broaden your perspective to find the hidden (Brøbecher & Mulbjerg, 2005; Gadamer, 1996; Jentoft, 2003; Nerheim, 1995).

The primary objective for health workers is to soothe pain and promote health (Nortvedt & Grimen, 2004). Practising ot has to be based on knowledge, an individual discretion and empathy. Practical knowledge follows reflections in problemsolving. Reflection demands sensibility (Latin: sensibilite') meaning susceptible and sensitive, attentive and susceptible, related to meaning and influence of the situation. Health and illness has to be understood as firsthand experience. For the therapist it is important to be sensitive to the clients' experience of the situation. This knowledge is situated, immediate and might be difficult to describe by words. Intuition is used.

Reflection (lat. Def) is the ability to think in concepts, to classify, to compare and analyse assertion and reasoning. To assess, to think over and critically analyse experiences. Reflection has a cognitive distance and the possibility to freely move between different opinions and occurrences. Epistemological uncertainty is the foundation of reflection (Nortvedt & Grimen, 2004). Reflection is by Woerkom (2003 i Høydrup p.98) defined as a complex activity aiming to examine ones action and the situation they appear. The core of reflection is the separation of thinking and action (short or longer), to stop for thinking, to create a distance to own experience, experienced problem and own action. This distance is of fundamental importance for learning.

Reflection needs time and room. It is related to situations and is developed in supportive environments when reflective processes can flow. Reflection can be done spontaneously or structured. Reflection is to be confronted with something new. Persons need individual support to make thoughts visual. The student's reflection-in-action can be supported by the teacher. How to understand the situation and actions? How to understand the problem? What are the possible choices and reasoning for actions. In this process the learner needs supervision. Schön claims that the most important activities in supervision are: to demonstrate (be a role-model), to supervise, to ask questions and to be critical. Reflection is related to unsecured aspects. Learning environments where trial and failure are accepted, with trust and security in systems, supports the students' reflections.

Reflection is connected to critical thinking, asking questions and being critical to established practice, theory and research. It includes and enhances the ability to organise and structure thoughts, get new perspectives and to explore topics. This might be a challenging process involving problemsolving, reasoning, consideration of different views and a questioning attitude. Critical reflection is a way of being conscious of and critical to one's own and the colleague's knowledge and professional action. Reflection can also contribute to balancing one's own resources and challenges in practical knowledge (Bie, 2007).

Learning from situations is important to become a competent OT. Reflection is closely linked to problemsolving, crucial to use in new situations according to Høydrup and Pedersen (in 2005, p. 100). Mezirow (2000b) claims that adult learning mostly is based on problemsolving actions. There is a difference in problemsolving when reflecting on the content, the process and the premises. Reflective problemsolving should not only relate to the methods or procedures used, but also focus on the meaning perspectives.

2.7 Meaningful learning

Meaning, critical reflection and action are central concepts in transformational learning theory developed by Mezirow (1991). Learning is a meaning making activity: *Learning is understood as the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one's experience as a guide to future action* (2000b, p. 5). Adult people need to understand their experience. When students meet a practical situation they first need a motivation to grip the problem, before starting the work with reflection and construction of meaning to their experience.

Creating meaning means to find meaning in an experience by interpretation. Mezirow makes a distinction between non-reflective and reflective actions. The non-reflective actions might be habitual; we do as we always do without thinking. They can also be considered like the strategy of arguing or playing chess. Non-reflective actions occur when implicit theoretical and practical validity is naively accepted or refused without discourse. Reflective actions are based on a critical assessment of assumptions. It demands a stop for review asking: What am I doing wrong? Critical reflection is deeper. It is related to the premises, a critique of the foundation our convictions are built on. This is related to habitual learning where our conscious and unconscious habitual expectations play an important role in creating meaning

(Mezirow 1990). This theory is relevant because the students in the process of changing learning strategy have to go through a dramatic change in the way them see themselves and the world they live in.

Perspective transformation is a highly cognitive process in which ones' *meaning schemes* and *meaning perspectives* undergo radical change (Mezirow, 1991, 2000b). Meaning perspectives are the lens through which a person filters, engages and interpret the world. We can change our attitudes or beliefs (a meaning scheme) or we can change our meaning perspective entirely. Meaning is developed through childhood, through the process of socialisation often in connection with emotional relation to parents and teachers. It is mostly uncritically established. The more intense and repeated, the deeper and more habituated established, the more difficult to change. Transformation of learning can occur after a long process with resistance. We can feel anxious when our experience does not fit our structures of meaning. To change this process, support is needed from the environment. When transformational learning occurs, it changes people and their perspective. It is described as feeling of relief and understanding, like AHA. People feel different afterwards, in ways both others and themselves can recognise. However, not all learning in adulthood is transformative. You can also learn from adding knowledge to our meaning schemes or learning new meaning schemes.(Mezirow, 1991, 2000b).

Significant transformation involves three processes: Critical reflection based on ones' assumptions, a discourse to validate the critical reflective insight and action. A disorientating dilemma often starts reflection and a learning process. The dilemma might be actualised because the previous used problem-solving strategies do not solve the discussion or a situation. Because the dilemma is personal and sometimes too provocative or difficult to solve, this could lead to non-action. The dilemma exists as long as the person is locked. The situation needs different choices and the person needs to reflect on their values, assumptions and understanding to get a new understanding. The person themselves must wish to take action. It demands courage to change action based on a new, grounded understanding. The learner has to be engaged in *self-examination*. This is often accomplished by feelings of shame, guilt, sometimes turning to religion for support (Mezirow, 1991, p. 168). Alve (2006)(2007) uses self-reflection as a similar concept. Critical thinking and self-examination is critical in developing practical knowledge.

The teachers want to facilitate practical knowledge. They want to support the students to proceed in a critically, self-reflective manner that aims towards more sensitive, respectful, non-dominating ot practice. In this process students needs to recognise feelings, thoughts and experience (Mezirow, 1991). How was the problem or dilemma understood? How did we act? Were the methods used relevant? Reflection on content and process can be done in-action and on-action. The meaning that people create as a result of a perspective transformation is highly subjective, personal and changeable. Mezirow's transformation theory of learning presents a way to understand how lack of skills in practical situations can lead to a dilemma of disorientation which gives a catalyst for reflection and learning.

Mezirow's theory has been criticised as being too politically naive and unrealistic when he claims that discourses and reflection are preceded free of domination. Power and social structures will always dominate the free and reflective discourse (Taylor 1997 in Brøbecher & Mulbjerg, 2005, p. 116). Mezirow argues that we have to believe in this ideal because the only alternative to the discourse is appealing to tradition, authority and the use of power (Mezirow, 2000a). These are aspects to consider when we expect OT students in Gaza to become more reflective, more self-reflective and critical in a society depending on support and framed by political conflicts and a struggle in obtaining power.

3. THE ACTION RESEARCH DESIGN

The action research approach represents a frame of reference for this pedagogical project. A central aspect of action research is to relate to problems in the real world, focusing on the process of change towards the goals that have been decided (Whitehead & McNiff, 2006). The situation of the OT students in Gaza initiated the actions. The goal was to educate them using flexible forms of learning and through a specially designed internet program – Ergonet. In this chapter aspects of the research design will be discussed. I will present the actions implemented, the method chosen, how information was collected, transcribed, analysed and documented. The different roles and involvement of the participants/ stakeholders, of the facilitator/researcher, have influenced the process, together with ethical considerations and theoretical perspectives implemented.

3.1 Action research as methodology

John Dewey (1859-1952) and the Chicago school are often referred to as the source of reflection and action inspired research. For Dewey it was important to create knowledge through practical actions and emphasise participation based on democratic values involving the actors in the process. Action research today includes a whole range of practices and approaches. The assumptions underpinning these are diverse, including political, psychological and philosophical perspectives (Koch & Kralik, 2006). Action research approaches includes Classical Action Research, Participation Research and Living Theory, each of which will be described.

The original classical Action Research Approach was established by Kurt Lewin (1880-1947) who is considered to be the founder of action research and modern social psychology. His favourite dictum was that if you want to try to understand something, then try to change it (Lewin, 1951). Lewin did not see the stakeholders as active participants in the research (Furu, 2007).

The Living Theory Approach, developed by Jack Whiteheads and Jean McNiff, (2006) involves the participants in the research to a greater extent. The *research objects* as

participants are doing research on themselves. They posit themselves as the research field observing and describing, and explain from their point of view what goes on in the project.

Participatory Research was developed in the later half of the twentieth century by Paulo Freire (1921-1997). He was one of the world's leading educationalists, claiming that the authorial teacher-pupil model had failed in developing people's critical awareness. Every person can develop self-awareness through a process of transformation from being a passive object to gaining control of their situation and responding actively to change (Koch & Kralik, 2006). This perspective is important for understanding Palestinian educational institutions aiming at changing the focus and pattern of learning (described later).

Participatory Research is based on collaboration among stakeholders and facilitators (Kielhofner, 2006). Kemmis and Carr (1986), who developed the *reflecting circle* in action research, represent this tradition. The circle represents the spinning process of planning, action, observation and reflection. They have also included critical theory in their approach, inspired by Jorgen Habermas (Furu, 2007). In the process of constructing knowledge through the action research approach, the strong influence coming from the environment has to be analysed. Habermas (1978) uses the term *knowledge constructing interests* to describe different knowledge perspectives and roles of the facilitators: the technician, the liberator and the practical. The technical researcher is an outsider who defines the problems and the direction of the process. Critical reflection is absent. The liberator sees the school as a product of the society. The facilitator has to participate actively in actions and critically reflect on their own actions. The practical facilitator, most used in this project, cooperates with praxis, supports the teachers to define their own problems and to plan strategies for changes and reflects together with the stakeholders on the changes caused by their actions.

This project posits itself between and uses knowledge from different traditions in the different phases of the project. This eclectic attitude is a part of the nature of action research (Hart & Bond, 1995). We see action research as a process by which change and understanding can be pursued at the same time through interplay between actions and critical reflections. Related to Carr and Kemmis (1986), research should be used to make practice better. This is exactly the aim of this project. The teachers should improve their ability in teaching and planning of learning activities. The students should be able to learn in a way that enhances their ot practice.

33

Action Research is, as in this project, commonly done by a group of people, and is often used in the field of education to improve practice. Levin and Greenwood (2007, p. 3) gives this definition of action research:

> Action Research is a social research carried out by a team that encompasses a professional action researcher and the members of an organisation, community or network (stakeholders) who are seeking to improve the participant's situation. Action Research promotes broad participations in the research process and support action leading to a more sustainable, or satisfying situation for the stakeholders.

Criticisms of action research refer to the lack of distance among the participants and the researcher which would reduce the validity of the study. A strong bond between researcher and participants could compromise the analytical and critical stance. In this work the methodological strategy might reflect different epistemologies. Epistemology refers to what is known and how it comes to be known. Whitehead and McNiff (2006) recommends some questions to keep in mind along the way. To which extent is knowledge obtained through reading books and research or by listening to people? Can we generate our knowledge from own experience? Do people have to be told or can they think for themselves?

3.2 Participation in the two parallel processes, the actions and the research

Action research is a strategy chosen with the intent to solve problems, to enhance knowledge among the participants and produce knowledge related to processes of change. The researcher follows and monitors the process and intervenes in order to improve the field studied. The concrete process of intervention or improvement becomes a part of the research process. Science and professional issues melt together and both sides must to be understood. In other words action research is two-sided. There are actions going on, not only to produce new knowledge, but also to contribute to improvement in the field studied by active participation from the researcher (Kalleberg, 1996). The researcher participates in the solution of practical problems, in cooperation with others. It is therefore also a learning situation for the researcher.

Central to action research is the relationship to problems experienced by people in an organisation or a working relationship. The focus is on the process of change, leading to goals

that have been decided in common (McNiff, Lomax, & Whitehead, 2003). It is a cyclic process with actions and analysis, feedback and altered action. The researcher becomes personally involved in the research field. The research process is supposed to enhance open reflection about actions and changes and a critical way of thinking in practice. The information is shared between the participants through meetings and written documents (Tiller, 1999). Being involved in educational development and research simultaneously as alternative parallel integrated processes is challenging. It is therefore important to enhance reflection among all participants related to the role of the researcher when involved in developing the content of Ergonet, and at the same time doing the research.

In action research it is not unusual to involve an outside person as facilitator. In traditional research, the researcher mostly stands outside the research field to observe, describe and explain what is happening. *Being a fly on the wall* is used as a metaphor for this perspective (Kalleberg, 1996). An opposite metaphor is to *Stick to someone like a Socratic leech* (horsefly used in Norwegian) indicating involvement and actions. Acting in both positions was needed in this project. As in traditional research, the research question is answered through the process of collecting and analysing information. In addition the action researcher has an active role in the processes of change. This demands a consciousness related to ones self-presentation. Strong beliefs and arguments and sarcasm are not to be shown. It is necessary to think of the influence of symbols, for example to be properly dressed according to cultural norms and activities. The role as an action researcher is particularly demanding. The double burden of Action Research is that you have to produce change and theoretical knowledge at the same time. It is complex and time-consuming activity. This could be an explanation for the extremely low productivity in academic terms (Kalleberg, 1996).

Subjectivity, reflexivity and self-presentation are important aspects in qualitative research. Hammersley & Atkinson (1996, 2007) refer to 3 different attitudes towards the process of research: the positivistic, the naturalistic and the reflexive position. The first two try to neutralise the researcher, while the reflexive position takes into account that all research is influenced by the formed socio-cultural conceptions of the researcher. My experience, cultural background and behaviour affect my interpretations and how the stakeholders see me as a researcher and colleague. That is why several researchers, for example, Elliot (1991), Bjørndal (2007), Hammersley and Atkinson (2007), Alvesson & Skölberg (2000) address the importance of reflexivity. As researcher I must exercise self-reflection and analyse how my

35

understanding and values affect the information collected and the stakeholders' feedback. But all influence from the researcher can not be eliminated. That is why I have to be humble and critical towards my own participation, research and findings.

Ethical reflections have to be made constantly and related to the role of the researcher. The researcher has to make decisions during the whole process. Because you can not decide in the beginning what to do, it is important to develop suitable analytic tools, procedures and project factors while travelling on the way. Unpredictability and chaos for the educators and students makes it important to promote the process when things seem impossible. This demands an open project plan and the ability to make decisions along the way. Related to Fuglestad (1997) the researcher becomes the method. It is therefore important for me to describe the project plan describing our systematic work, analytic aspects and ethical considerations made.

Participating in action research can be liberating and educative, give empowerment and set the agenda for reform and validate the knowledge of the participants. Participation is a central core moving from a philosophy of doing things to people, to assist them to identify their own needs and formulate their own strategies to meet them. Action research makes a distinction between practice as habitual action and praxis as conscious action (Furu, 2007). To reach the goals, habitual ways of practice are to be challenged and questioned to find more useful strategies and praxis. The intention of action research is to make an impact, to fuel a process of ongoing learning and attention, providing a new perspective to the participants. Action Researchers can only create knowledge in co-operation with social actors based on trust and a free agreement to participate. For a research to become action research, a balance of action, research and participation is necessary.

3.3 The research process in Palestine

The main project group consists of 3 female OTs coming from New Zealand (NZ), Palestine (P) and Sweden (S) (left midways). They were familiar with Palestinian culture, had experience from clinical work in Palestine and were teaching both in Bethlehem and Gaza. The facilitator/researcher and participants were periodically working together, but had different roles. Initially we cooperated in making the frames: project plan, application for financial support and formal approvals in the BU system and getting hold of necessary technological resources and knowledge. We were all involved in different ways during the

process of making the professional learning material for Ergonet. The teachers at BU did all the teaching, grading and evaluation of the students. The leader of the OT programme had also the primary responsibility for the professional development of Ergonet, while I was responsible for leading the research process. In the developmental process we acted as facilitator and participants, in the research as stakeholders and researcher.

Mixed methods is often used in action research (Greene & Caracelli, 1997). In this project, fieldwork, individual and group interviews and e-mails, in addition to the text and films in Ergonet were used in achieving the research material. The research project lasted from 2005-2007 following the 4th-8th semesters of the OT program. The following figure 1 presents the timeline of the different actions phases and research methods.

Figure 1   TIMELINE: presenting the Action phases and the Research methods following.

	2005 January-June	2005 July-December	2006 January-June	2006 July-December	2007 January-June	2007 (extra) July-December
ACTIONS						
Establishment						
Project org.	x	x				
IT competence	x	x	x	x	x	x
Internet access			x	x	x	x
Finances	x	x	x	x	x	x
Exploring						
Internet Moodle	?	?	x	x	x	x
Video conferences	?	?	x	x	x	x
Practical skill courses	x	x	x	x	x	
Evaluation video	x	x	x	x		
Education video		x	x			
Implementation						
Professional dev. Of Ergonet	x	x	x	x	x	x
Technological dev. Of Ergonet		x	x	x	x	x
Implementing Ergonet in teaching					x	x
RESEARCH						
Fieldwork	x	x	x	x		
E-mails	x	x	x	x	x	x
Ergonet		x	x	x	x	x
Interviews with:						
NZ teacher				x		x
P teacher				x		x
S teacher				x		
NZ & P teacher					x	x

As pointed out, the action research was planned and initiated by the participants and facilitator in cooperation followed by critical analysis. Professional development was obtained by reflection individually and in group, by action, evaluations and by changed actions. The goal

of this project was to improve practice, to produce knowledge and to document processes of change.

The different phases in action research, the plan, action, observation and reflection has been continuously repeated. The first step was working together to find a mutual understanding of the problems to be solved. This involved making guidelines and a plan for the cooperation and the research process. Informed consent (attachment 1) and a written initial plan for starting the project was made and distributed to the participants and supporters of the project. The participants and researcher had to examine, to analyse and decide which steps were needed to reach the goal. When the steps were made, they were analysed for consequences and new strategies. The steps were repeated over and over again until the project finished. Action and research has been integrated as described in the timeline presented in figure 1. Action Research involves three aspects that need to be analysed and discussed. These are taking action, doing research and finally telling the story of your findings (Whitehead & McNiff, 2006). I will first present how we organised the project and the action taken.

3.4 Organising the project

I will further present the 3 main phases from which the project has been organised: These are the establishing phase, the exploration phase and the implementation phase as presented im figure 1.

The initial establish phase had two dimensions. The first was to establish the project among the participants and stimulate engagement and commitment. The second phase was to organise the project and establish it at BU. Obtaining sufficient finances, equipment, and technology and internet access were important issues in this respect. We had to gain sufficient ECT knowledge to be able to make good choices of flexible tools. These issues ran through the whole period of the project.

In the first phase decision making was done among participants and organisations involved. We discussed the current situation, pedagogical resources and needs and how it could be solved. What should the students learn? What problems did they experience in teaching and learning? What kind of technical and pedagogical competence was needed and integrated in teaching? From these discussions we made a project plan describing what we wanted to

achieve. NORAD was the main financial sponsor in developing flexible forms of learning and meeting the needs of completing the education of the Gaza students. NETF supported the project both financially and professionally. The Digital Media Centre at BU and the Computer Center at TU gave technical support in the process of making films and developing Ergonet. TU financed the salary of the research part. We obtained knowledge for using and choosing digital equipment and pedagogical tools using computer programs and software programs like PowerPoint for teaching and Mind-map for planning. We searched for an e-learning program suitable for analysing practical knowledge and chose the learning-nett, renamed to Ergonet. The programme was originally developed by Professor Britt Kropelien (Norway), who also supported the project and supervised us in this phase. We started developing the knowledgebase and editing films for Ergonet. We made a new design and technical organisation of the Ergonet suiting our pedagogical intentions. We also used Mind-map to organise the development of Ergonet (attachment 4,5,6). Initially in this phase, the researcher had an active role implementing the frames of the project.

The action research is based on the interaction between different forms of practice. The OT teachers in Palestine represented different cultural perspectives and clinical and teaching experience. I brought experience from ot clinical work, teaching and research from Norway. In this first phase I was highly engaged in making the frames of references for the project. After planning the project together, starting to work on the knowledgebase of Ergonet, we decided that even though we all participated in both actions and the research, we had to take different responsibilities. The leader of the OT program became responsible for the professional process of developing Ergonet. She and the teachers did all teaching and evaluating the use of flexible forms of learning to facilitate practical knowledge. I was the facilitator and responsible for the research process.

In the exploration phase several actions were done, mostly by the teachers at BU. We spent a lot of time reflecting on how practical knowledge was taught to the students on campus at BU. We discussed the challenges of teaching ot in a Palestinian culture and reflected on how improvement could be achieved. What sort of developing learning tools and strategies of learning could facilitate practical knowledge? Further elaborations are presented in chapter 4.

To facilitate practical knowledge among students in Gaza and Bethlehem, the teachers explored the use of different flexible tools. Ot theory and skills were taught and practiced in

the classroom, by using videoconference and the internet program Moodle. Teaching took place in Bethlehem, in Gaza and Cairo. Films demonstrating practical skills were made and distributed to the students. Students' practical knowledge after these courses was evaluated in a videotaped practical exam. The teachers supervised the students in their clinical placement. They experienced challenges and difficulties in reaching an acceptable level of practical knowledge, especially for the Gaza students. This was related to isolation, the chaotic context of war and isolation and deeply rooted cultural traits, but also insufficient learning strategies among students and didactic aspects in teaching. These experiences, systematically and critically reflected and documented, have a profound impact on how Ergonet was developed to facilitate practical knowledge. This exploration phase was important to identify what has to be learned through experience.

The collaborative thinking about learning and reflection on the experience was a powerful process of building self awareness and self-confidence. We were travelling on unexpected pathways and experienced that reflection increased self-knowledge and prepared the participants to make deliberate, well-informed choices. Experience from these actions will be presented in chapter 5.

In the implementation Phase, experiences from these actions guided the development of Ergonet, professionally and technologically, and the way it was used in teaching of the Gaza students. All the teachers were involved in planning and making films for Ergonet. They were acting in the role of therapist, sharing their knowledge. Professional films for Ergonet were made, supported by the media centre at BU. Informed consent was written both in Norwegian (attachment 2) and English (attachment 3) and obtained from the therapists and clients involved. I have edited most of the films, while the leader of the program was mostly responsible for the written analysis and integration of practical knowledge following the sequences of the films. The teachers at BU contributed with their knowledge and skills. The experiences of the professional and technical development of Ergonet will be presented in chapter 6.

Finally Ergonet was implemented in teaching. The experience from using it, the impact it had on teachers teaching, assessment and evaluation of students' skills, and how it affected students learning, will be presented in chapter 7.

40

Together with the teachers who participated in this project, goals were set along the way. The content of the flexible forms of learning were made and integrated in the education of OT students both in Gaza and the West Bank. I have been a part of the actions and the research monitoring information exchange and feedback between the action part and research part of the project. As a researcher, I also needed to withdraw in order to choose, categorize and analyse in a systematic way, as Pausgaard (1997) recommends. It has been a challenge for me to handle the ethical dilemma that Fuglestad (1997) highlights. Through fieldwork the researcher develops a loyalty to the professional content, but it is important to be more loyal to the research. I will elaborate on ethical dilemmas and reflections by presenting the research process.

3.5 The methods chosen for the collecting of information

Action research is not a special method, but a holistic research design of constructive (empirical) character where the researcher actively participates in changing interventions. Different methods such as surveys, statistical analysis, interviews, focus groups, ethnographies and life-history are accepted. But they have to be agreed upon by the collaborators and used in a way that does not oppress the participants (Koch & Kralik, 2006).

Different methods and triangulation has been a strategy in this project (Alvesson & Sköldberg, 2008). The methods have been chosen and used related to the intention of the project. The voice of the participants had to be heard. We had to relate to an unpredictable context. Travel restrictions, destroyed videoconference equipment, cutting of electricity, closure of checkpoints and problems with mail delivering sometimes made teaching impossible. Through the whole period, the students' right to freedom of movement was denied.

Usable methods have been those giving the participants the opportunity to reflect their thoughts and assumptions for actions and learn from them. Factors such as workload, time available and distance also had an impact on the way we organized the progress of the research. Fieldwork, individual and group interviews, correspondence by e-mail together with the films and knowledge made for internet have been thick resources of information in answering the research question of how to facilitate practical ot knowledge by using flexible forms of learning.

41

Methods for data collection through fieldwork can be seen as a special, goal directed interaction between the researcher and participants. Understanding unfamiliar cultures can be compared with learning a new language. It is about finding the right way to act. According to Saugestad (1997), a minimum of common cultural premises, a common code and communication has to be present. In this project the OT profession, the theory and practice is this code, which has given researcher and participants common understanding of the concepts and practices to be further explored.

The regular e-mails between the participants, the facilitator/researcher and the other involved persons supporting the project professionally and technically, have been important. They tell the story of our experiences and challenges on the way and what we have actually done. The e-mails have contributed to keeping the process going and the wheel spinning. Methods for data collection through e-mails is described by Koch and Kralic (2006) as liberating, empowering and educative. It can move people towards reflexivity and new understanding. Habitual ways of working can be challenged and questioned and innovative way s of working with people can be created.

Based on the experience from e-mails and fieldwork, from distance and closeness, information and experiences in written descriptions emerged. Balancing of distance and closeness emerged through the written e-mails and cooperative fieldwork. The process of working close for days, and being separated for months, gave rise to ethical implications concerning analysing and publishing the research. The teachers were easily recognised. I chose to use a video camera and interview the teachers in order to highlight the information shared for research, based on our experience of working together intensively for brief periods and from e-mails when working apart.

The intention with the interviews was to highlight, discuss and reflect on experiences from the practical skill courses, from the process of developing flexible forms of learning and using them to promote changes and learning. My questions were related to my fieldwork experience and e-mails and the process of developing the content of Ergonet. Informed consent was obtained from the stakeholders, not only as a statement on a paper, but also as a method of working throughout the project. They knew that the information and reflection that has been shared in interviews, will be described, analysed and published. It has not been important to address every statement to the person who said it, also from an ethical point of view.

Shortcuts are used naming the teacher from New Zealand, NZ, the Palestinian, P and the Swedish, S.

All participants were individually interviewed. Focus group interviews were used when common experience was discussed, like the experience from teaching the Gaza students in Egypt. By using videotaped interviews in group, verbal and non-verbal communication between the stakeholders become visible. Mostly I saw that they are very agreeable, building on each others arguments and thus giving more in depth information.

The videotaped interviews have been helpful in the process of transcribing the information. The language was more easily understood when you also could see the mouth of the stakeholders. Since nonverbal communication could be observed, you also got more information related to their feelings. I also got directly feedback on myself as the interviewer, the way I asked questions and followed up the reflections, the things I overlooked. It has been educative for developing skills in interviewing. But, most important in the choices of doing interview with video camera has been an ethical consideration. Video camera gives a strong indication that this information will be shared through the presentation of the research results. This gives me as a researcher the important distance. The knowledge from the research is transformed in to the learning project in the way we developed the content of Ergonet. It has influenced the didactic and practical knowledge related promotion of reflexion and problem-solving for the students.

3.6 Analysing information and securing validity

The most important aspect for securing validity is making the research process visible. Presenting how we guided, monitored and stimulated the development of flexible forms of learning in the education of OTs at BU, and documenting this process through research. The missionary task for action research is to enable people, without danger, to observe, tell, understand and change what is actually done by using, colleagues, their own experience, or anyone else that can give details of actual practice and events. This creates a possibility to learn individually and collectively (Aagaard Nielsen & Svensson, 2006).

Throughout the whole project there has been an interchange of theory, methods and analysis between the action and research sides of the project. Research is an active and ongoing process (Cullum, 2003). The action research project has focused us on how to use the research knowledge from developing and using flexible forms of learning, has materialised in the shape of Ergonet. In the action research project the analysis based on fieldwork notes, interviews and films has resulted in new knowledge about learning and learning strategies related to practical ot competence in the Palestinian culture.

Throughout the project we tried to keep focussed on the research questions, but also had to deal with other questions coming up continuously. The action research circle has been spinning around and around. It has been impossible to make a very firm structure, meeting regularly with all participants involved. Instead we have been working together for a week two or three times a year in Palestine and/or in Norway. The regular contact has been on e-mail, making it possible to discuss and solve all the questions and problems occurring in practice. This project has been a journey of discovery, meeting and solving challenges: What is practical knowledge? How can suitable tools be developed and used to support the students learning process? Are flexible forms of learning the only solution due to the isolation of the Gaza students? What can and should the teachers do to reformulate a given social reality to a better social reality? We learned from the experience by working systematically and documenting the process. We were aiming for good quality of the material to be used in the future OT programs at BU. These questions have guided us all stages on the way. The very demanding task in this type of normative-empirical study has been threefold. Related to Kalleberg's (1996) suggestions: (1) It has to be realistic, (2) give alternatives to the exciting situation and (3) make it possible to find ways of changing the situation worth the cost of change and readjustment.

None of us had experience in doing action research when we started this project. We knew that we had to develop more knowledge of flexible forms of learning in order to deliver high standard education to the Gaza students. We knew that we could not plan everything before we started. We had to make some choices, do some action and learn along the way. It has also been clear for me that action research is a methodology that only can be learned by doing and from reflection on the experiences along the pathway (Dewey, 1975).

This document has been written during 2008/2009 based on analysis of the empirical information and theoretical perspective implemented. To be able to handle the research material in accordance with ethical and scientific norms I had to create a distance to it. The distance is mainly an analytic one, looking at the material through the theoretical perspectives. It is also a distance in time and space referring to the period between data collection in Palestine two years ago and the analysis and writing in Norway. The last also represent a sort of cultural distance.

The analysing process contained many phases. The first phase was reflection in action with the participants and on my own. The second was reflection after doing the actions. This was also done together with the participants related to our experience from developing flexible forms of learning and the participants' reflections after using it in teaching and how this affected students learning and competence. Our reflections influenced on the way Ergonet was developed.

The third phase was the analysis of the written material. The information from the interviews was transcribed. The e-mails arranged in one document. Together with the notes from the fieldwork, the information was coded and categorised in themes of importance in teaching and in the process of facilitating practical knowledge. The documentation of the actions and the research, developed through 3 years, consists of field notes including notes from meetings during the process, 7 qualitative interviews, 250 e-mails and 10 films. Theoretical perspectives were implemented together with the categorised themes by using the hermeneutic circle in analysing. By studying details from the teachers' experiences of processes and changes, by implementing theoretical perspectives, a new knowledge and deeper understanding might occur.

There were many aspects of the Palestinian and ot culture that I did not understand. I had to ask a lot of questions even though I had been involved in the OT programme for many years. I was aware that in Palestinian culture the novice role is not highly valued and you can loose your strength as a researcher. But at BU I always felt welcome and accepted. Economic and political instability influenced the educational system at all levels in Palestine. Extensive

45

travel restrictions and closures during the Intifada[12] affected everyday life, studies and teaching for both students and educators. Since my regular work at TU is to educate OTs, I felt I could contribute with professional, but also personal support through these very difficult years of the intifada with violence and travel restrictions affecting all Palestinian citizens. This affected me emotionally and in some periods I lost hope, feeling that the situation was spinning from bad to worse. But knowing that the situation affected everyday life for the people of Palestine, to a higher extent, kept me going.

Inspired by Kalleberg (1996) challenges and questions of doing action research have followed the analysis. I have to self-reflect of being a researcher in action. Will pragmatic usefulness of the action research lead to neglect of theoretical knowledge? Will the knowledge produced only be useful for local users or can the knowledge be generalised? Can the knowledge be useful for teaching practical knowledge for other health professions such as physiotherapy and nursing? Is this knowledge of interest for teaching isolated prisoners or in countries where rote-learning in school is highly established? In countries where democratic rights and the individual opinions are less implemented in upbringing and education? To what extent should the views of the teachers striving to teach the Gaza students be publically shared, without presenting either group in a negative view? These questions have been following me, but can only be answered by the participants of the project and the reader of this document. In the end the New Zealand teacher through the material, giving her comments on ethical issues and English writings. Finally the Palestine and Swedish teacher read the report and from an ethical point of view accepted their statements and presentation in this report.

I will further present the result of the action research organised in the following chapters:

4. Challenges experienced in developing practical knowledge in OT in the Palestinian culture
5. Using flexible forms of learning to facilitate practical knowledge
6. Developing Ergonet
7. Implementing Ergonet in practice

---

[12] **Intifada** (انتفاضة *intifāḍat*) is an Arabic word for *shaking off*, though it is generally translated into English as rebellion. "The word "intifada" crystallized in its current rabic meaning during the first Palestinian uprising in the late 1980s and early 1990s. It is often used as a term for popular resistance to oppression.

4. CHALLENGES EXPERIENCED IN DEVELOPING PRACTICAL KNOWLEDGE IN PALESTINIAN CULTURE

I will initially present some of the challenges the teachers involved in this project experienced in facilitating practical knowledge in the education of OTs before the introduction of flexible forms of learning. Habitual learning strategies such as *memorising techniques* and *box-learning* have to be changed into using higher cognitive skills in learning such as reflection and problem solving. The teacher wants to facilitate the students' ability in the areas of critical self-reflection and cooperation skills. In this process it is important to be aware that both the lack of clinical OT supervisors and role models and the presence of inappropriate clinical OT supervisors and role models make an impact on students learning. Theory knowledge is added to obtain a deeper understanding to their experience and to support the ensuing action.

4.1 Holistic education in a biomedical practice

This has something to do with the culture of the organisation and the expectations
The OT program seeks to educate OTs in a holistic frame of reference. The teachers experience that many OTs, shortly after graduation, socialise into the medical model which is the most dominant model in clinical practice in Palestine. This means in a simplified way that the OT acts more as an expert, focusing on function and medical knowledge which is the opposite of client centred practice and a focus on occupation and quality of life. Krefting and Krefting (1991) describe how the influence of the reductionist biomedical model of health-care plays a key factor in influencing a therapist's interpretation of professional models and theories and provision of services. Therapists working in large medical institutions can be forced to focus on the disease and disability of the individual. Focus is set on abnormalities of structures and function of a client's body isolated from socio-cultural aspects and experience of illness.

This change after graduation is related to what organisations expect of OTs, but also relates to obtaining and maintaining power. The NZ teacher explains: "This has something to do with the culture of the organisation and the expectations. What you have to do to be accepted, to have some power". Holistic philosophy is value-based and fundamental to a therapist's

personal belief (McCall, 1994). However, the stimulus of status, belonging and recognition for aligning with the biomedical philosophy is potentially more powerful. Mattingly and Fleming's (1994) research on clinical reasoning among OTs supports this notion. The predominance of the biomedical model of health and illness in western societies can make it difficult for therapists to focus on socio-cultural aspects of illness. It can be impossible to effectively utilize the profession's proposed holistic approach (Kinebanian, 1992).

In a holistic practice the experience of the client and their family is valued and a focus in treatment. Holistic practice focuses more on the client's resources than on the problems. The team has to cooperate to meet the needs of the client and family. Palestine is a tribal society with a high level of cooperation, within the family. Cooperation outside the family and tribe is more difficult. The educator experiences that the students have problems in cooperation working on a common project. They have problems defining the tasks and dividing the roles. Their feedback to each other can be very nasty and personal, becoming infantile and telling tales. Their cooperation skill increases during the study, but the student groups differ depending on the personalities. Difficulties in teamwork are evident in several areas. This is a big problem also in the wider society, and in the government. It often has to do with the struggle for obtaining personal power. If you cooperate and share with others, you will lose power. "Somehow cooperation is something that is ultimately not good for you in the long term", states the NZ teacher.

The S teacher exemplifies this with a story from the time she was working in a Palestinian institution. As a newly employed foreigner working in an OT department, she experienced that the OT assistants had greater knowledge related to local conditions. She asked questions and involved them in therapeutic discussion. The assistant expected the OT to be the leader, to direct their actions, not to discuss and ask questions. "But then they thought we were less competent, not as skilled as them. We were less valued than them. We were supposed to be over them". The therapist should act like an expert and instruct the assistants what to do.

4.2 Traditional learning strategies

The students learn from a very early age to rote learn, to memorise everything.
Learning by memorising is rooted in the Palestinian education system, also at BU and even more in Gaza. Evaluation and tests are based on the ability to memorise. The P teacher shared

her own experience: "The way the education is run here is more like a spoon feeding stuff, memorising stuff… The students learn from a very early age to rote learn, to memorise everything. You know very concrete things that they have to know and they just put that in tests". When you walk around the campus at BU you can actually observe students walking around memorising pages and pages. "This comes from the education system". This habitual learning experience established from primary and secondary school must be changed during the education in order to become an OT. The professional knowledge is practical. It demands higher cognitive levels of learning skills using reflection, analysis and problem-solving. This becomes a great challenge for the students beginning the OT program. The students initially expect the OT program to be structured and recipe-based. "They need a lot of feedback and a lot of structure and direction… They are used to memorising something and then getting a BIG tick from the teacher".

Knowing in the western theoretical tradition is described by Molander (1996) as knowledge separated from action; you don't need to use it. This learning strategy, based on behaviourist, scientific ideals, is the most valued way of teaching concepts worldwide in schools today (Hermansen, 2006). In this tradition the teacher decides the correct knowledge to be rewarded. The students seek ongoing attention from the teacher and expect an educational program based on factual, goal-directed and recipe-based knowledge. The learning is environment based, mechanical and demands no reflection. Teaching is carried out face to face in the classroom and the students are expected to memorise factual knowledge by listening to the professor and doing the required reading. This demands low engagement of the students (Biggs, 2003). It is a surface approach to learning (Marton & Booth, 1997).

Ingrid Lindquist (2006) shows in her study among physiotherapy students in Sweden and England that one of the most valued learning experiences from the first year was learning from support and feedback from professors. The OT teachers at BU find the Arabic countries' teaching tradition between western and eastern tradition. Like the western, they emphasise memorising and rote-learning. They find it nevertheless practiced more frequently in Palestine than in their western homeland.

4.3 Integration of knowledge

We have a lot of boxes, <u>a lot</u> of boxes and very little control
The OT program curriculum divides courses into theory, skills and practice. In teaching they are integrated by the way the OT teachers use their clinical experience in exemplifying factual knowledge. The program also uses a number of different tasks / evaluation methods that force reflective and creative thinking in combining attitude, knowledge and skills. The NZ teacher says: "I think we have managed quite well in integrating theory and skills and mainly in terms of the evaluations we do". What is more problematic for the OT students is to integrate related knowledge taught by other professions at the university. Kielhofner (2004) describes related knowledge as information from other professions useful and necessary to ot practice like psychology. This knowledge is separated and not integrated in practice: "We have a lot of boxes, <u>a lot</u> of boxes and very little control of what some people are teaching really". The P teacher also addresses this issue: "What is more of a problem is integrating all the other related stuff that they learn because they learn it and put it in a box. Psychology is in one box, sociology is in one box".

The knowledge seems to be stored in the boxes and easily forgotten. It is not integrated and used. The OT educators lack control over what kind of knowledge some other professor puts in these boxes. If these teachers expect the students to memorise, it interferes with the efforts of the OT educators in developing reflective practice. "If professors are expecting the students to memorise, a lot of the work you do against that is gone". The OT program is not the only program at BU facing this problem. Changing the pedagogical strategies to enhance reflection and practical knowledge is discussed among the professors at the university. The NZ teacher says: "There is a lot of awareness about it as a problem". This discourse about pedagogical strategies should be enhanced because it resonates with the pedagogical strategies of developing higher cognitive levels in learning.

4.4 Practical skills training in the classroom

Clinical fieldwork and skill training represent **47** of 95 credits in *Required Occupational Therapy Major Courses*. The students must obtain a minimum grade of C in the clinical fieldwork, or repeat the course. Figure 2 presents the organisation of courses and credits in them program at BU. The four courses *Occupational Therapy Theory (14cr)* followed by

Occupational Therapy skills (16cr) are together with 6 **Clinical Fieldwork (23cr)** the main focus in facilitating practical knowledge in this project.

Figure 2: Required Occupational Therapy Major Courses

OCTH 110	Introduction to Occupational Therapy (3)
OCTH 120	Introduction to Health Care (3)
OCTH 112	Principles and Practice of Occupational Therapy (4)
OCTH 121	Introduction to Anatomy & Physiology (4)
OCTH 122	Introduction to Neuroanatomy (2)
OCTH 123	Therapeutic Skill – Typing (2)
OCTH 210	*Occupational Therapy Theory I (4)*
OCTH 211	**Occupational Therapy Skills I (4)**
OCTH 310	*Occupational Therapy Theory II (3)*
OCTH 212	**Occupational Therapy Skills II (4)**
OCTH 220	Human Growth and Development (4)
OCTH 221	General Pathology (3)
OCTH 308	*Occupational Therapy Theory III (3)*
OCTH 309	**Occupational Therapy Skills III (4)**
OCTH 311	*Occupational Therapy Theory IV (3)*
OCTH 312	**Occupational Therapy Skills IV (4)**
OCTH 313	Community Based Rehabilitation (4)
OCTH 314	Adaptive Equipment Workshop (3)
OCTH 330	Teaching and Presentation Skills (3)
OCTH 353	Health Services Management (3)
OCTH 355	Research and Evaluation (5)
OCTH 401	**Clinical Fieldwork I (2)**
OCTH 402	**Clinical Fieldwork II (3)**
OCTH 403	**Clinical Fieldwork III (4)**
OCTH 404	**Clinical Fieldwork IV (4)**
OCTH 405	**Clinical Fieldwork V (5)**
OCTH 406	**Clinical Fieldwork VI (5)**

We do some hands on demonstration so they can actually see it

As presented above, the OT programme at BU has several practical skill courses during the study. The courses are organized with lectures presenting medical and ot factual knowledge combined with analysis and problem-solving skills in assessment and intervention. The students also watch demonstrations with patients. According to Dreyfus and Dreyfus (1986) simple tasks that are rule based can be learned and practiced in the classroom. This knowledge is context free. This teaching strategy is based on master-learning tradition. The students observe the teacher to copy their actions.

The neurology courses were first held for the Bethlehem students. The content was knowledge related to neurological diseases such as Stroke, Parkinsons Disease and Multiple

51

Sclerosis. The teacher first demonstrated different treatment strategies. Afterwards the students practiced skills like transfer techniques[13] and the Afolta which is a guiding[14] technique. Later they went to clinics to see clients. "We do some hands on demonstration so they can actually see it" (S).

The S teacher planned to go to Gaza to give the same teaching for the Gaza students. In the autumn of 2005 the Israelis closed the border for weeks, preventing her from going. She planned to use videoconference, but the equipment at the British Consulate in Gaza was destroyed by Palestinians reacting with anger related to the Mohammed drawings. Foreigners were kidnapped and it became dangerous to go there. The only way to communicate with the students was through the internet program Moodle. She gave them literature to read, questions to answer, but it was obvious for her that this was not a good way to teach and practice skills. The students had problems understanding central concepts. It was also difficult to evaluate their skills. "It was a practical course. It was not planned for the internet... I was not satisfied with my work". The course was planned for teachers and students to interact in the classroom. It was a challenge to make knowledge meaningful as practical and analytical tools to guide practice. According to Molander (1996) there are three intersectional aspects of knowledge needed to facilitate practical knowledge. When the students are doing skill training, discussions with the teachers are necessary. They need to reflect on central concepts in ot related to technique, performance, present abilities and future achievement. In the process of creating a professional identity, it is also important to listen to masters' stories related to similar experience. In addition it is also necessary to touch and guide the students, to meet them physically. The teacher then chose to meet the students in Cairo for doing the neurological skills course in ot.

4.5 Embodied and situated knowledge

They do not have the ability to transform their knowledge into a practical situation.
Ot demands practical knowledge exemplified and made concrete by skill training in the classroom and clinical fieldwork with an OT. On the first skills course in Cairo, the students trained on transfer techniques. The OT first demonstrated how to do it, followed by the students practising on each other. The students were role playing working with "clients". It

---

[13] Transfer techniques are those techniques used in moving from one surface to another, for example bed to wheelchair.
[14] Guiding is when the therapist holds and starts the movement of e.g. the paretic arm.

52

was obvious that this skill training was very important, because the students seemed to lack embodied knowledge. The S teacher said: "They are not that used touching each other... You know, having a grip that is convenient. They were very hard-handed on each other". (The teacher demonstrates by moving her hand quickly and grips the hand hard around the arm). "All these grip, I do not know how many times I said it, but it did not come naturally".

Embodied sensibility and knowledge is developed through activity and physical play while growing up. You can not get this knowledge by reading only. The body is to be seen as a space to experience the world and to train and incorporate skills. Practical knowledge is situated and embodied. It is presented through incorporated bodily skills and familiarity with the environment (Alve, 2006; Merleau-Ponty, 2002). The lack of practical knowledge could be culturally grounded. It was obvious that the students had to practice more and the teacher had to push them: "Try more, try more".

The teacher was impressed by their ability to correctly recite factual knowledge. She asked herself if she needed to teach all the subjects because of their knowledge, but she did anyway since she already planned for it. At the test after the practical skill course the students had difficulties with understanding and integrating the meaning and use of the knowledge that they had memorised. "They did not have the ability to transform their knowledge into a practical situation". The questions on the test forced them to think for themselves and describe ot strategies using reflection and problems solving skills. It is a practical knowledge.

For the Gaza students their lack of practical knowledge is also due to the lack of OTs as clinicians, supervisors and role models. They express their need for supervision from OTs: "After Cairo the students in Gaza ask for more supervision at their clinical workplace. They know that this has an impact on their performance. It was positive that they felt the need for it". The Gaza students can learn concepts, but it will be harder for them to practice and train skills since there is no OT in Gaza to train practical skills and supervise them. This worries the S teacher: "No, it won't be good OT. I can not imagine because it is very practical. It will be very hard for them to make it on their own, especially since it is none there to guide them". It is obvious that the lack of a variety of masters in OT for the students to observe and hear their stories is a disadvantage for the students. It demands high engagement and work to

practice with each other and individually. But most important is for the students to understand their need for learning. It demands self-reflection.

4.6 Professional self-reflection

They do not differentiate between doing a critical evaluation in order to learn something from that, and presenting themselves well

To be able to provide a culturally sensitive practice, a professional requires self- awareness, knowledge and skills. The development of self-awareness and insight enables professionals to be aware of their own assumptions about human behaviour. As a result, they will be more open, sensitive and accepting to the needs of others. Self-reflection is a similar concept described by Berger and Luckmann (1967) and Goffman (in Alve, 2006) and is an important issue in the education. Critical reflection is another similar concepts used by several pedagogical authors (Bie, 2007; Biggs, 2003; Merriam & Caffarella, 1999; Mezirow, 2000b).

An important part of the learning process is the development of self-reflection. Teachers need to train students to see themselves from an outside perspective. Self-reflection is important for developing knowledge and sensitivity, developed by conscious reflection of how our values and attitudes affect situations. Berger and Luckmann's (1967) approach to self-reflection is called *a mirror response* to the attitude of the other; a way of reflecting on personal behaviour in encounters with the patient. Through interaction with another person we have to stop, arrest the continuous spontaneity of our own experience, and deliberately turn our attention back upon ourselves.

Facilitating practical knowledge for the Palestinian OT students requires training principles to be integrated with a personal way of interaction. This is not only a subject for Palestinian students. Based on fieldwork among OTs in Norway, Alve (2006) describes a distinction between a personal way of interacting and a training way of interaction. She suggests that the personal way of interaction should be more emphasized in OT education. The therapeutic role constantly evolves. It is dynamically developed through reflection used in the training process to develop the knowledge base and reflection to develop the personal way of interaction in face-to-face situations with the patient. Developing a personal way of interaction also demands the development of a professional sense of decorum (Mezirow, 2000b). It is

developed from and integrated with the personal sense of decorum brought with you from childhood. It integrates the attitudes, knowledge and skills desirable to become a professional therapist. This needs situations where these habits can be embodied as described by Bourdieu (in Hermansen, 2006).

After the skills course, the students had a practical exam. They were given a piece of paper saying: Instruct/support the client, who suffers from stroke, to move from the bed to the wheelchair. Or support/instruct the person who is lying in the bed to sit on the bedside. Or "support/instruct the patient to put on his pants and shoes. Immediately after a practical test, the students were asked to evaluate their own performance. The self-evaluation showed no difference between the students who got an outstanding grade, an average grade and the students who failed the skill course. "Every single one of them gave at least 85%, above average, outstanding range of performance". For both the groups, from BU and Gaza, there was a gap in the evaluation of practicing skills done by the students and by the teacher. The students frequently over evaluated their own performance. They also had problems with stating a reason why they did well. "I should not generalise, but it was very obvious that they have a great belief in themselves. The students seemed really unable to look at themselves in a critical way, and make some kind of appraisal".

When the evaluation gap is too wide, it becomes problematic. "If they think that they have done something outstanding, and we fail them, then it is very difficult for them to understand and accept that someone else did not evaluate their performance in the same way as they did". The students in Bethlehem were expecting top grades and became very upset. This had a big impact on their feelings, it felt unfair. Even the family interfered. One of the students thought he would lose his scholarship if he did not get top grade, experienced major consequences related to getting low grades. This shows the dilemmas in changing the pedagogical strategy. It is important to be aware that grades can be opposed to self-reflection. While most of the Gaza students also got low grades the first time they had their practical exam, they did not complain. "We hope that they could in fact see what they were doing wrong. But I think we will only know it when we do it again and see if we have had some kind of impact".

"I think it is also a cultural thing, presenting your selves in the best possible way", said the P teacher. It is important for the students to know that their difficulties performing practical

skills can be resolved by practice and experience. It is not a personal issue. To make and use flexible forms of learning material that can enhance the ability of the students for reflection, analysing and problem-solving is a complex issue. The Palestinian students are not used to learning from questioning and justification. "They do not differentiate between doing a critical evaluation in order to learn something from that, and presenting themselves well. This is a major problem and it then makes it difficult for them".

Goffman (in Alve, 2006) emphasises the importance of awareness that personal acting in different ways affects all interaction between people. Practicing role distancing is important for self-reflection. From social encounters, developed from childhood, a person learns to separate different roles and one-self. A person without conflicts manages to make this separation. It is relevant to ask oneself how upbringing and the ongoing violent situation in Gaza have an impact on the students' ability for self-reflection.

4.7 Summary

Initially I have presented important aspects and challenges the educators experience in the process of facilitating practical ot knowledge among the students. These challenges are important for pedagogic understanding of how to use flexible forms of learning to promote practical knowledge and how Ergonet can be developed and used.

According to Biggs (2003) the learning patterns of the Palestinian students such as reliance on rote-learning, passivity, teacher dependency, lack of creativity and problem-solving is considered to be "cultural" in origin. These things are also referred as Low-level engagement (Biggs, 2003) and surface approach (Marton & Booth, 1997). This is confirmed by the by Ballars and Clanchy (1997) and Harris (1997) studies of perceived problems arising with international students from non-Anglo-Celtic culture like Africa, Middle-East or Far Eastern countries. Their studies show that students from these countries in western universities are too teacher-dependent, too uncritical of the material they have been taught and prone to rote-memorisation. Biggs (2003) points out that instead of making stereotypes, it is useful to ask if these problems emerge when the students come from a more passive, protective culture of secondary school, to a more academic culture of university. Many students find bridging these two learning cultures difficult.

For the Gaza students their surface learning approach might be due to several factors including high anxiety due to the political situation. Lack of democracy in society and education, probably does not support a self-reflective attitude. Socially they are physically separated in Gaza from their peers and teachers, not getting the support and assistance needed for meaningful, deep level transformative learning. The teachers have to find other pedagogical strategies improving teaching to avoid these factors. According to Biggs (2003), good teaching is to get all students to use the highest level of engagement where they explain, relate, apply and theorize. Practical teaching can promote this.

The discussion of challenges the OT educator faces in educating the OT students in Palestine, is not intended to put students or teachers in a bad light. The purpose is to enhance critical reflection among the teachers in how flexible forms of learning can be developed and used in meeting these challenges in facilitating practical knowledge. Students are responsible for their own learning in colleges and universities, but the goal of all education is never the less the learning of the students. According to Frøyen (2005), supervisors and educators are responsible for the learning of the students through the choice of goals and learning activities they involve students in. The educator makes plans and adaptations for learning. He/she is responsible for *what* and *how*, but also for giving the students justification of the choices he/she makes. The educator is responsible for making good, prepared educational programs and learning situations. By studying this process we can be more conscious in our pedagogical choices in the process of developing Ergonet and other flexible forms of learning. These are: 1. To support self-reflection among the OT students. 2. To change students learning strategies from memorising techniques to more reflexive and reasoning ways of learning. 3. To enhance the development of problem-solving skills and process in occupational therapy. 4. To develop awareness of cultural aspects influencing practical knowledge.

We want to challenge the students to improve their ability to reason and reflect on their ot performance to understand how different social, personal and cultural dimensions have an impact on the client's performance. We want them to argue their choices and perform with clients and partners in a qualified way. Reaching these goals demands hard work from both students and teachers. The teachers' experiences from using flexible forms of learning will be further described.

5. FLEXIBLE FORMS OF LEARNING IN FACILITATING PRACTICAL KNOWLEDGE

During the 3rd. year of the OT program the teachers started to develop and use flexible forms of learning systematically in the process of facilitating practical knowledge with both groups of students. Their experience of using tools such as the internet, videoconferences, educational films and videotaped evaluation will be described further.

5.1 Videoconference and internet as tools in teaching and supervision

Because of the unstable political situation in Gaza, videoconference and internet were used both in teaching and in supervision of the Gaza students during their clinical placement. In the following I will describe some of the challenges and possibilities the teacher experienced with these media. The period referred to was between the first trip to Egypt in June 2006 and the second trip in January 2007.

This is a big challenge, but it is a great experience

The Gaza students were physically isolated from their classmates in Bethlehem, but had some contact through discussion groups on internet. Videoconference lessons in the courses research and management also brought the two groups together in the classroom. This was a positive social experience for the Gaza students. As the P teacher says: "Now they are seeing the educators some time, and they see other students from BU. They commented that they feel a bit more included". Research indicates that the Classroom seems to be the strongest link for the students, not only in an academic way, but also sociologically and psychologically. Student satisfaction is higher in these face-to-face classes (Bray, 2007).

Because the videoconference centre the students in Gaza had been using was destroyed, the only option was to use the internet. Two of the teachers had useful experience from being internet students themselves. They supervised the students in their clinical practice using the internet only. They never saw the students and could not see anything they were doing during

58

their fieldwork. A discussion forum was implemented using Moodle, the synchronous e-learning platform used at BU. Here the students and teachers could ask questions, get feedback and discuss important therapeutic issues related to their work with clients. The NZ teacher felt that discussion and critical thinking was a challenge for the students. Their discussions of theory were very superficial for example: "Yeah that is really good". She asked for statements: Why is this good idea and why is this not such a good idea"? The Gaza students had problems to benefit from being taught through the internet. The research of Brown and Liedholm (2002) found that traditional classroom provides learning benefits that distance course can not match. Students perform best on the most complex material than their distance delivery peers.

At the beginning of their clinical practice the students seemed unfocused and unorganized in relation to how they performed actions in the clinical practice. The P teacher related this to lack of OT role models in Gaza: "It decreased the amount of observation they get in terms of how the educators does things, how they perform stuff, the skills they do". But though it took time for them to understand, she could see improvement in the way they asked questions and used to the ot terminology. At the end the students became more focused and organized, being able to identifying problems and make priorities: "They started to get the issue". Usually she did not respond individually, but gave all her comments in an open text to involve all the students in the whole discussion. This also forced them to pay attention to the other students in the group. She also experienced that the supervision through the internet made the contact between her and the individual student more direct and closer.

The P teacher found supervising on the internet very demanding. Technical problems dealing with computer and internet were a constant challenge. It was time consuming and she spent 2-3 hours preparing for a small discussion. Like the students, she always needed to be organized and updated on core literature. The preparation and structure of the whole session varied from meeting students face to face. The way of asking questions and describing problem solving, was totally different. Brey et al. (2007) highly recommend to make planning and structure a priority when e-learning is to be implemented in distance learning. It is important to consider the workload because extra time for training, planning and developing the courses and accompanying materials is needed.

Though it was challenging, teaching and directing through internet also was a positive experience and a learning process for the P teacher. She experienced becoming more conscious of what she was teaching. "This is a big challenge, but it has been a great experience". It differs a lot from what she termed "the traditional Palestinian way of learning". Because: "you need a lot of new ideas, to be creative about different ways of giving information. You need to think around the things to do, how to ask question, to enhance and make analysis and discussions easier for the students". Blanchette (2001) found in his study of questioning and cognitive function that the interaction in this on-line context is more intellectually demanding than found in face to face. The question and response is more on a higher level than face to face verbal context.

However, the teachers were not convinced that the students actually had done all the work they presented by themselves. Because they could not observe them working, other people's work could be presented, for example copying from the internet. According to Vygotskij (1978) is the only way in understanding knowledge developed, is by observing the person in action. The internet communication between teacher and students was text based only. Both the teacher and Gaza students expressed the need for clinical examples on film, visualising ot. Situations visualised by film would be helpful for the students in order to develop observation and analytical skills which are crucial in ot evaluations and treatment of patients. Film based learning material could be used several times. It could enhance the possibility of sharing, analysing and discussing knowledge. The P teacher planned to ask the students to make clinical films presenting their work with clients: "I would recommend films or recorded stuff next time. I need to see them reacting with clients on film. This also might be a greater proof for them to see how things change from the beginning to the end. It would be a great difference". Based on these experiences the teachers decided to make more educational films and make more use of videotaped evaluation of students' practical knowledge and skills.

5.2 Videotaped evaluation as tool on-campus

In order to evaluate the students performance in practical skills related to neurological impairment (as previously presented), the practical exam was videotaped by staff from the media centre at BU. I was also present in the room which was equipped with a wheelchair, a bed and a chair. Two actors played clients with functional problems according to different neurological diseases. This action was first done at campus in Bethlehem.

60

Then they could see for themselves

As previous described, it was difficult for the students to accept the judgement: "There was a lot of arguing about why they did not get the best grade. I felt like I was coming no way, like I was banging my head in the wall". Watching the film made it easier for the teachers to grade and later to watch and discuss the performance together with the students. Reflecting together helped the students to understand the evaluation and become more self-reflective. An important change happened: "Then! Then, they could see for themselves. Then they could actually become more self-critical too". Another teacher said: "When we showed them the film, without exceptions they were able to see why they got the grades they did". It was obvious that this reflection on this film was an important change to promote self-reflection related to the students' practical knowledge.

Mezirows' transformational learning theory (2000b) tells us that the students have to go through a deep change in order to make this shift. They have experienced their lack of practical knowledge as a dilemma of disorientation. The students did not understand why they got low grades. The dilemma exists as long as the person is locked. For the discourse to happen, the participants themselves must wish to take action. The videotape in which the students performed practical skills became a catalyst for reflection and learning. The students needed to make a choice and reflect on their values, assumptions and understanding to obtain new understanding. This was a transformative learning change. The educators experience from using films in evaluation of the Gaza students will be described later.

5.3 Educational film as a tool

I am more of an observational person. I rely on what I see

To meet the need of the students to improve their practical knowledge an educational film was made. The teacher visualised how to use different techniques like guiding and transfer techniques in activities of daily living with patients (actors) suffering from paresis because of stroke. This first film gave the teachers some basic experience of making educational film: "We learned a lot from that first film, because we actually made it again from the beginning. When we looked at it, it was just too sloppy and unprofessional". They experienced that making the film was fun and with some experience, not too time consuming.

Wells (1999) claims that the written word serves best to mediate recalling and reflection, while the spoken word function most effective in mediating action. I will also add the importance of visual demonstrations to mediate actions. The education film demonstrated how the S teacher as therapist, supporting the P teacher acting as client to transfer independently. The NZ teacher verbally instructed the therapist choices and actions. The students at BU used the film to learn practical skills: "The students like it and use it. They always refer back to it". The film visualises performance. It had an impact on teacher and students' motivation: "I think the best I have done was when we looked at that film showing transfer techniques. Everybody was very alert, looking and listening". The teacher experienced that the film helped the students to increase their observation skills and become more focused. It made it easier for them to understand, to reflect and discuss phenomena in the film. The teacher emphasised this way of learning: "I am more an observational person. I relay on what I see".

The very complex practical situations OT students are supposed to handle are not easily learned by reading only. The next film they made showed short sequences demonstrating the impact of neurological deficits on performance of daily living activities. Examples are neglect and apraxia. By visualizing complex practical situations in ot practice, by emphasizing interaction between different dimensions of professional knowledge, the education becomes closer to practice and more concrete.

The teacher experienced that this form of dialogue and evaluation with the students gave great results. The students in Bethlehem used the feedback seriously and worked very hard. They copied the film on transfer techniques and practiced at home and did the same practical exam again. This time there was a "**dramatic** improvement in their grades". .. We got **extremely** good results from using that in Bethlehem and in fact, I think we have some very objective measures of that." Another said: "I think using the film was amazing. For the first time I felt that now, now they understand. We would never have come so far without the film".

The film was very concrete and instructive. It also gave the student an opportunity for master-learning. They could study the experienced OT visualising how to interact with a stroke patient (actor) and select, plan and implement a transfer from bed to wheelchair. By watching the film over and over, they could copy the action, practice and master it well. According to Dreyfus (2001) the novice student can learn to copy these type of actions at the internet.

They were just flashing in their head and bringing up a picture of the transfer film.
In the next practical exam the "clients" had different problems. The students had to use different medical and therapeutic strategies and knowledge to help clients with rheumatoid arthritis and spinal cord injury to transfer. The students came into the room where the teacher was observing them.

> They read the strip of paper and went straight to the client and just did something. They did it wrong of course because they had not thought through: What kind of position should I use? Where should I position myself in relation to the client? What strategy do I use, where do I have to get support, none of this. They were just flashing in their head and bringing up a picture of the transfer film.

The students did not reflect, analyse nor problem solve the situation. They got stuck in their knowledge based on rote-learning the transfer film. This situation challenges the teachers to think differently in terms of how to use the educational films. The NZ teacher said:

> There is a disadvantage in that because they kind of rote learn it. We need to use it in a different kind of way. I think we have to emphasise the problem-solving bit when we are teaching them. This has not occurred to me before I sat and watched them actually doing it, because they do not do that. They just trying to remember something and some of them got in such a tangle. It was just a big mess. The techniques that you use for Stroke clients, they were trying to use with a client with Spinal Cord injuries.

Acquisition of skills occurs through observing, imitating and being supervised by several masters, by meeting many, and by opportunities to work with patients with the relevant problems. Skills are learned in different stages. The students had passed stage one related to the 5 stages of Herbert and Stuart Dreyfus (1986). They have memorised and learned the rules learned from a practical situation and can use the technique in a specific context. But when the context changes, such as when the patients have different problems, they do not manage to evaluate when to modify the rules or do the steps in a different order. All the visions, impressions and information related to the patients seem overwhelming. The misfit of using learning strategies based on recipes and memorising are obvious. It does not fit the different situations. The students must stop and reflect before they start action. Based on this experience, the teachers decided to make a shift in how they teach the skills course. Reflection and problem-solving has to be emphasised by asking students questions like: "This is the person you are going to get from here to here. What is the position that you start from? Where do you position yourselves? What kind of support do you need to give"?

Based on the positive experience of using videotape in the evaluation of students' practical skills, the students had become self-reflecting.

> The students at BU with the skills course did really badly, but at least we did not have all this battle with them. They came afterwards and said: Oh I did this really stupid thing working with this spinal cord injured patient and said: can you move your legs. They did the wrong kind of test, but at least they could recognise it. That is more important, than doing it perfectly.

The other teacher says: "The most important thing is if they can recognise what they are doing wrong". The students were aware that they had a gap in their professional knowledge. They had developed self-awareness and insight enabling them to be aware of how their values and attitudes impact on interaction in process and situations. This awareness is essential for being open to, sensitive of and accepting to the needs of others (Alve, 2006).

The education film was, with a lot of logistical effort, sent to the students in Gaza. They were told to watch it and practice on their own. The teachers did not know how much they used it for practising, nor did they get the same positive feedback. They did not get the impression that the film was of great value for the students.

5.4 The second practical skill course in Cairo

But they did not know how to do it

After the first practical exam in Cairo the teachers gave the students feedback and a recommendation to practice skills on their own in Gaza: "They had a lot of practice time because the first assessment they did really, really badly". On the second trip to Cairo, eight months later, their skills had not improved to the expected level. It was obvious that they did not manage to practice skills on their own. The teacher and students spent the first day repeating knowledge practiced in the previous skill course. Next day the students were asked to demonstrate their practical knowledge. The student felt this was a waste of time expressing: "Yes, we know this already. We do not have to do it". Jarvis (1995, 2004) relates this statement to resistant against learning. He uses the concept "presumption" when you prevent yourself from learning, claiming that your knowledge is enough and sufficient.

The students' difficulties facilitating practical knowledge and skills can be exemplified with how the teacher experiences the way in which some of the students performed this exercise. She was role-playing a "patient" without language who needed help to transfer due to paresis.

> Some of them were giving some commands that I could not respond to. A couple used **totally** inappropriate techniques. They were moving me inappropriately. They did not put the brakes on the wheelchair when they were transporting me, and I fell down of the floor. They rolled me off the bed. They… were supposed to get me up but had no idea what so ever and it became a big argument (NZ).

In this example the students had not learned the basic rules of transportation and mobility skills (Dreyfus et al., 1986). Another example was also given:

> Previously in Egypt, the students had been taught the Afolta technique, which is a guiding technique. You get a lot of sensory inputs that starts the guiding, like the therapist push on the back. One of the techniques is that you do not talk to the client because that confuses the input. In the final exam, some of them had to perform this technique. The student who was doing the task, he did not talk to me the whole time, but he was verbalising what he was doing. He was giving this commentary on his actions. He pushed my hip and he would say input. Commentaries were running all the time: Change side, input. I was given the verbal input, plus the guiding.

This exemplifies that the student had memorised the knowledge related to guiding. He had memorised and could verbalise his knowledge, but not managing to perform the practical skills. You know what to do, but do not know how. You do not manage to tie things together, to use your knowledge practically in planning and performing. Dreyfus and Dreyfus (1999) relate this to level 2 in developing skill performance. The student had learned the rules learned in a clinical situation, but the information in the situation seems overwhelming.

I live in the same culture, have obligations, but I am still thinking that you are not doing enough
The most experienced and disturbing part for the teachers is that most of the students did not seem to have practised enough since last course. Neither did they seem to accept or use the feedback given from the teachers. The students' presumption has led to *non-learning* (Jarvis, 2004). This situation has to be changed. The P teacher confronts them:

> I am a person who has almost the same circumstances as you. I live in the same culture, have obligations, but I am still thinking that you are not doing enough. There is a problem within you. It is you, not anything else. You always say: Yes, but, OK, give me a chance. It's not me, it's this and this and that. You are not doing enough and I am not accepting this. Other teachers, coming from a different culture, would maybe understand it differently, maybe feel with you. But it is not going to happen here. I know exactly what you are going through and it has nothing to do with what is going on.

Her confrontation was directed towards the students' resistance towards learning and the way they always blame their circumstances and make excuses for not working properly. She confronts their lack of self-reflection. To improve practical knowledge, you have to combine new knowledge with the old. Conscious reflection, problemsolving, choices and evaluation in and over action is the process of making actions therapeutic. The teachers decided to use video to enhance reflection, problemsolving and critical reflection among the students.

5.5 Videotaped evaluation as tool off-campus

The worst part is that they do not accept feedback

The neurological practical OT exam was videotaped and the students' performance was graded. *"In the group of 10, 25% did very badly, and another 30-40% rather badly. Two of the students failed. But some of them did a lot better, two of them got an A for the course"*. Like the Bethlehem group, there was no difference in the self-evaluation between the ones who got low grades and those who got top grades. They all presented themselves as very skilled and competent. This is verified on tape.

The teachers used different strategies to discuss their inadequate skills, but the students were giving excuses saying: "Yes, but, yes, but, most of the time". Together they watched the video, but the students did not seem to accept and use the feedback given from the teacher. It was very hard for the teacher to help the students to understand their lack of knowledge. The teacher's relate this to their permanently high self-confidence. The students argue that they know what to do in therapy, but as the teacher says: "They do not know and they can not recognise that they do not know it". The worst part for the teacher is to listen to all the excuses and their total lack of responsibility: "The fault is always on somebody else, always". They blame the client for not being cooperative or too disabled. The teachers are blamed for not teaching them properly and not giving them enough time. They cannot practise skills on teachers because it is very shameful for the male student to touch the female teacher. But how can you practise skills when touching is shameful? One of the teachers expresses her anger and frustration:

> The worst part is that they do not accept feedback. They do not summarise it, and they do not take it out later when they need it, cognitively. They just block it out because they know it… You know they do not take feedback from each other, they do not worry about what the teacher says, they know everything, and they do everything. They are perfect. They have no problems at all. That is what they think, personally or professionally… These students are not ready for critical thinking.

Reflection is connected to critical thinking, to asking questions and acting critically in relation to established practice, theory and research. Critical thinking is to see connections, to organise and structure thoughts, to reach new perspectives and to explore topics. This might be a challenging process involving problemsolving, reasoning, consideration of different views and a questioning attitude. Critical reflection is a way of being critical to one's own and the colleague's knowledge and professional action. Negative criticism or personal mistakes is not the focus, but rather learning from situations (Bie, 2007). This is essential to become a competent OT. The problems of the students in cooperation and accepting critical feedback, seems related to loss of honour. The P teacher shares her opinion:

> I think for Palestinians in generally, it is more acceptable in this society for the therapist to be an expert. Looking at what you have done wrong is not something that is kind of inbuilt. Because as a therapist you do not do to much wrong (laughing) This is a much stronger mentality in Gaza than it is on the West bank. So it is very difficult for them to do that kind of shift. It is quite difficult for them to criticise each other honestly. They find a lot of difficulty doing that.

The students do not manage to differentiate between professional knowledge and being OK as a person. They lack cooperation skills and critical reflection which makes a major challenge becoming a competent OT.

5.6 Lack of motivation and self-directed learning

The ability to become a competent practitioner demands proper study skills and hard work. You have to look, listen and ask questions to obtain knowledge. You have to take responsibility for your learning, obtain knowledge and practise skills. In the middle of the Gaza students' 4th and last year of the program, the teachers become more and more frustrated. They experience that the students as a group were far from reaching the adequate levels of practical knowledge for this stage of the program.

It is like pouring something into a pot with a hole in, nothing stays
The teacher experiences low attention among the students:

> They do not listen to what you say. They shut down for everything. So they come and ask again: Why did you ask for this? What did you say? Even though you write it down on paper, they still don't see it. I do not know. They are not attending to what you are saying… It is like pouring something into a pot with a hole in, nothing stays.

It is obvious that the student have problems with concentration. This could be due to the traumatic learning environment in Gaza. An insecure social environment, insufficient learning strategies, the lack of teachers and OTs to observe, guide, act as role-models and tell stories, disadvantaged the students. The teachers try to give the students interesting assignments, to sparkle their interests, but without success. The students complained: "This is really boring. This is too much. This is not fair". Most of the group had inappropriate study skills, passively reading and not taking notes or asking questions. The teachers spend time teaching them study techniques, telling them: "write some notes, give yourselves quiz and mark the answers, be a bit active in your learning". The teachers felt that the students spend too little time, but complained and expected the teachers to make a lot of effort. "It is like they want us to swallow it for them as well as putting it into their months".

The Gaza students learning strategies has lead to what Jarvis (1995) describes as non-learning. Their presumptions and rejections prevent them from learning new things in a new context. The learning environment has lost its structure and formal authority. If the authority is missing, indulgence might becomes a survival strategy for the teacher (Dale, 2000). Teaching might be performed without didactic reflections and in the worst case become pathological. The students' lack of progress and motivation has strongly affected the motivation of the teachers, making them angry and exhausted at this stage in the program.

When we describe the problems the teachers experienced in facilitating practical knowledge with the Gaza students, it is important to make a distinction. There was a variety of attitudes, skills and learning strategies among the individual students. Some of the students are smart. Some worked hard. Some had a higher ego than others. The teachers knew the students as a group had more resources. They needed to take more responsibility and be more organised in their self study. The teacher said: "If they work by themselves, they will be something. I hope it is not too late. I am praying that they catch up sometime".

I feel like an old, broken record
Through the whole study, the students often postponed the deadlines for handing in assignments. Many compromises were made through the study progress, leading to a vicious circle:

> The students seem to be very skilled in pushing things, so they push the limits all the time. I have a lot
> of problems at BU because we very rarely finish on time. I think we probably compromised more than

we should have done, because, what else can you do? I think sometimes, let it go and that is to my regret…I feel like an old, broken record. You get stuck and you are going over and over the same things about deadlines. But what kind of consequences does it get?

When the students fail the exams, it is extremely difficult to organise a repetition of the courses, especially the practical skills. The teachers became angry because the students did not seem to appreciate their hard work and effort made to help them complete their OT education. The NZ teacher said: "They have no idea how much work this have been, no idea at all. They are just constantly complaining". The teachers expect some kind of appreciation for all the extra effort they make for them. They arranged and paid for two *nice* weeks in Cairo: "Not one of them said thank you at the end of that time, not one of them. I was quite shocked about it, the other teacher as well. It is not that you want gratitude. It is just common courtesy". The P teacher confronted the students before leaving Cairo:

> You were not thankful at all the means that the NZ teacher and the Norwegians have given you. You are always blaming them, saying this is not enough. They could have left you in the middle of the way and you could do nothing about it. But they insisted to get you to the end. You are not really happy.

The students were listening, but at that time she felt that most of them did not accept her criticism. Because of the continuous conflict with the students, the teacher felt disliked: "They hated me for this", followed by the other teacher: "They are not very fond of me either".

It is obvious that the formal authority is missing and indulgence has periodically become the surviving strategy for the teachers (Dale, 2000). But what options are there? Stop the program and leave the population of Gaza without OTs? Fail most of the students and never finish this project? This would definitively be a waste of time and money. They were obliged to continue and learn from this situation. The teacher from NZ reflects on choices made on the road that could have made an important change.

When I think about it now, I will do it very, very differently.
The NZ teacher had set some criteria for the intake of students. She wanted mostly female students with high grades and good English skills. They should come from poor families who could not afford the cost of study since she had obtained scholarships to cover the students' expenses. The problems started with the applications for the program. The information and the intake of students was organised inside Gaza. 42 students applied for the program, 39 men and only 3 women. The teacher wanted more female students: "I did not have a lot of control

69

with the people who were organising the cohort. I went over and over and over this again, saying I want more girls because they've got better practical skills". She was told that the parents would not let their daughters go to Bethlehem for 4 years of study. But it seems like the girls who applied got the study information by coincidence. I was very angry about it. But it was too late. Financial funding of the studies might also have affected students' motivation and selection of students who got the information: "This was a mistake we made in the beginning by funding them".

Another issue was that the students were never able to attend their class. At BU 30% of the OT students leave the program, most of them after the first semester due to the high demands for English and study skills. On the campus it would have been easier to deal with all these problems because of the group dynamic and the influence of the rest of the group. Since they had to stay in Gaza, they did not want any attrition of the group of only 10 students. The teachers felt a kind of responsibility for getting them all through: "That was a real dilemma. I felt a kind of responsibility".

The program in Gaza was mostly done in the same way as in Bethlehem. I know that everything I have tried with them works here. The teacher admits that there are problems directly copying an on-campus programme to a long distance-program. It has to be acquisitioned differently: "I think if I was going to do that again, I would have to do everything differently, **everything"**.

The most important change is to start earlier with film evaluation to promote feedback and self reflection. Some students should have been sent out of the program at an earlier stage:

> In the beginning we were maybe a little bit easy on them. I would not do that again, just like I do not do that here any more. I went tough right from the beginning. If you accept something, it is difficult to backtrack from it. But if you stop from the beginning, saying this is not acceptable.

The students will have to work harder, doing their assessment on time or they will not pass the exam or fieldwork. But, despite this time of frustration, the teachers felt that they have learned a lot from this project: "We got a lot out of it. I think we also learned a lot out of this experience too. We have learned more than they have, much, much more, ten times more".

70

5.7 Summary

Garrison & Anderson (2003, p. 27) identify three key elements of inquiry that have to be considered when planning and delivering an e-learning experience: Cognitive presence, social presence and teaching presence are aspects important to reconsider and reflect upon. Teaching presence is important for realising personal, meaningful and educationally worthwhile learning outcomes. This is necessary for facilitating cognitive and social processes among the students. The students have problems with their cognitive presence, of being able to construct and confirm meaning through sustained reflection and discourse in a critical community of inquiry. Cognitive presence is enhanced and sustained when social presence is established. Do the students have the ability to protect themselves socially and emotionally in a society of inquiry through the medium of communication being used? Neither of these aspects is functioning in the education of the Gaza students. The interaction between students and teachers seems locked and unconstructive. Balancing between the intended outcome and the needs and capabilities of the learners is important. The teacher has to enhance facilitation, to model critical discourses and reflections by also constructively critiquing their own contributions. The question is how it can be done effectively, in a different way?

Development of self reflection is crucial for promoting therapeutic competence and client-centred practice. Based on the very positive experience in promoting self-reflection and practical skills, videotaped evaluation will be implemented into the program to a greater extent, starting with the 1st. year students. The use of video film to promote self-reflection has a great impact helping students to see the gap and lack of knowledge. Video film is a strong medium: *Seeing is believing!* Film and videos provide a base from which to reflect on different ethics and knowledge not apparent by first sight.

How can film be used in differently to facilitate critical reflection, problemsolving and reflection among the Gaza students, crucial for the acquisition of practical knowledge? How to change their learning strategies from surface to deep approach in learning? What can we do to enhance situated and experienced learning by giving students access to masters in OT and their skills, stories and therapeutic thinking. The teachers experience and reflections has an impact on the way Ergonet will be developed and used. The goals became as follows:

1. Flexible forms of learning should be developed and used to support self-reflection among the OT students.

71

2. The teaching and use of flexible forms of learning should emphasize change of students' learning strategies from memorising techniques to more reflective and reasoning ways of learning.

3. The problem-solving skills and process in ot should be enhanced.

To obtain these goals, the teachers have to role-model to a greater extent how they problem-solve and critically reflect on their own action. In the following chapter I will present our OT professional and pedagogical thinking implemented in the way Ergonet was developed, together with technological choices made along the road.

6. DEVELOPING ERGONET

Developing Ergonet demanded conscious reflection on how to structure basic professional ot thinking in a content management ECT system: How can ot knowledge be structured? Which kind of practical situations and analytical tools are relevant for learning? How to facilitate Palestinian cultural perspectives in ot? The teachers experience from the practical skill courses gave directions for the process of developing Ergonet. The pedagogical intention was to develop a more creative learning platform to enhance the students' ability to achieve a deeper approach in their learning strategies. The professional intention is to visualise and structure practical ot knowledge.

Through Ergonet we wanted to develop more creative and active forms of learning to sharpen the ability to observe and assess, to train analytical skills and stimulate interplay between observation and analytic skills. The complex practice situations OTs are expected to understand and act upon, are not easily understood by reading only. Visualising practice can support the students by making abstract theoretical reading more concrete. By emphasizing the interplay of different dimensions of professional knowledge related to concrete situations, practical knowledge can be developed. By using film, both teachers and students can analyse clinical practice and share and discuss their understanding related to their knowledge.

6.1 The content of Ergonet

The ot based content of Ergonet is organized in 6 options that can be combined in different ways. These are: lectures, analysis, knowledgebase, terms, media bank and student activities. Figure 3 shows the introduction to Ergonet. This is an example of the main principle of the presentation in Ergonet, the presentation of text and picture of OT students presenting puppets made at a creative practical skill course. I will first give a presentation of these elements before going in depth to our most important experiences from developing Ergonet which are knowledgebase, lectures and analysis.

Figure 3 presents the INTRODUCTION page to Ergonet

Lectures web-site is presented in figure 4. There are two options to choose between in making a lecture, to create a chapter document or a simple article document. The simple article document is better suited for shorter documents not to be divided in chapters. In the chapter document you can create chapters and subchapters using a wide range of different multimedia tools like film and photo. The document will have an index and the student can in a simple manner go through the document chapter by chapter (presented in figure 11).

Figure 4 presents the introduction page and an overview of the LECTURE made at this stage.

The Lectures presented in Ergonet differ from ordinary OT textbooks. Practical knowledge is exemplified by film in combination with analysed text. It presents historical events or ideas, for example how to make adaptations in the environment for disabled children. It can be stories told by clients and their families of how disability affects their lives, or it can be Occupational Therapists and teachers sharing their knowledge. The intention is to stimulate the students to see the relationships between different phenomena, and the integration of theory and practice related to actions supporting clients to participate in meaningful occupations. Hopefully the lectures will stimulate students to further reading.

TITLE	AGE	CLIENT, HEALTH, ILLNESS	OCCUPATIONAL THERAPY
Why Occupational Therapy in Gaza?	---	---	---
Living with autism	---	Developmental	Knowledge
Being active in school and kindergarden	0-12	Neurological	Knowledge
Reflection around assessment and therapeutic aspects during intervention	7-12	Developmental	Knowledge
Interview with Danica	20-40	Mental Health	Health promotion
Interview with Jill	20-40	Mental Health	Health promotion
Interview with David	41-65	Mental Health	Health promotion
Interview with Ahmad's therapist	7-12	Developmental	Knowledge
Art as an occupation: the meaning of being an artist	20-40	Mental Health	Occupation
Occupational therapy skills	---	Neurological	Knowledge
Interview with Atarangi	41-65	Mental Health	Health promotion

Analysis is the main element of Ergonet. As stated in the introduction page in figure 5, this is the web-site where the students can find filmed situations presenting client and OT engaged in assessment and treatment. Analysis of the situations is presented in a text following the film-clips. It combines descriptions, assessment, intervention, analysis and reflection of the attitudes, skills and knowledge needed in the clinical situation. Central illustrated concepts from the knowledgebase are hyperlinked- and can be opened in the text.

Figure 5 presents the introduction page of the ANALYSIS and an overview of films made at this stage

The Knowledgebase (figure 6) is a hierarchically built tree structure (figure 7) of nodes branching into sub-nodes and sub-sub nodes built around descriptions of significant concepts in Palestinian OT culture. (Some of the text is still in Norwegian). The nodes of significance are the environment, the client and the therapist. Internet based articles, websites and pictures are hyperlinked into the text, bringing in depth knowledge.

Figure 6 presents the introduction page of the KNOWLEDGEBASE, the main nodes and references.

Figure 7 presents CLIENT in the knowledgebase and how it is HIERATICALLY built.
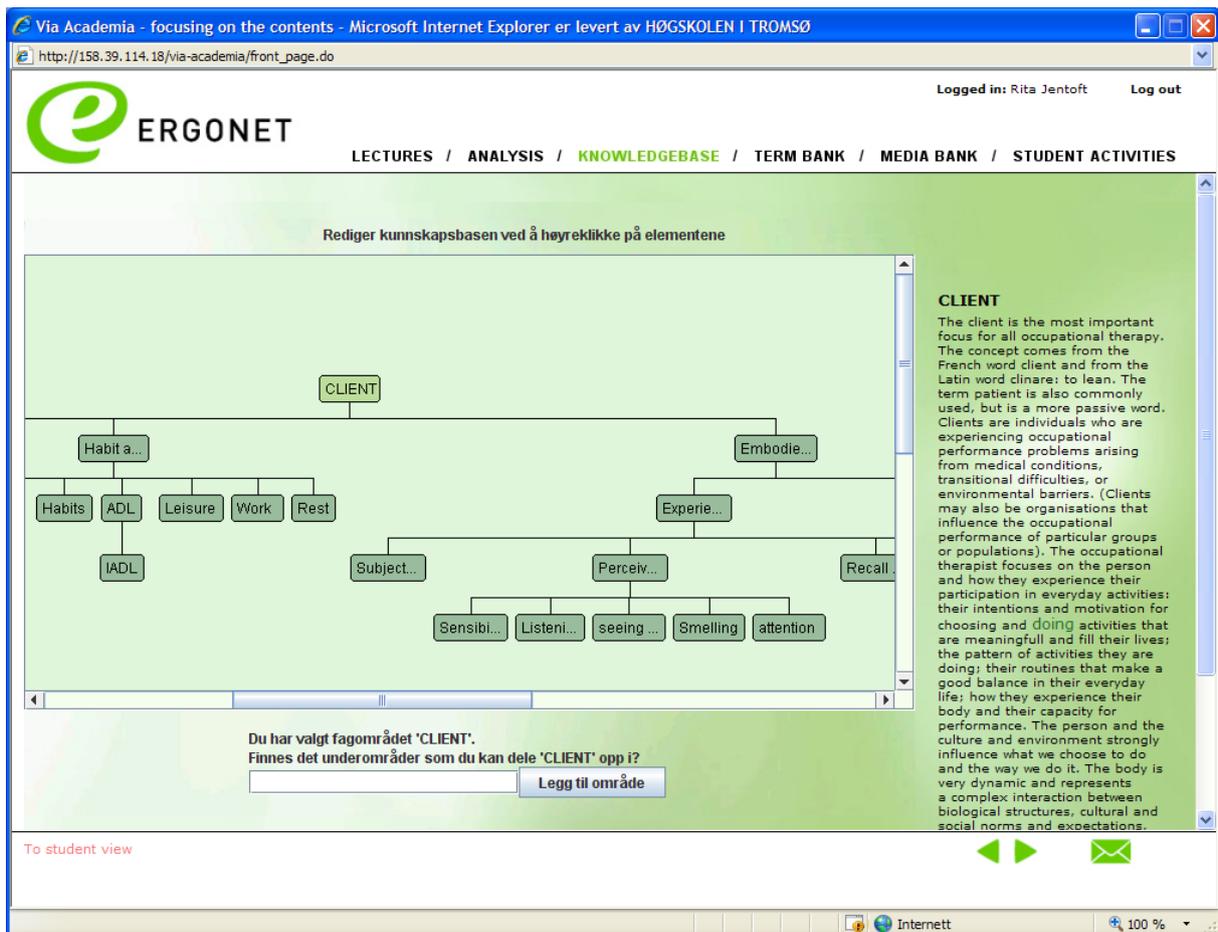
The Terms are short definitions of central terms necessary to understand the ot language that can be hyper linked into lectures, analysis and the knowledgebase. They can also be searched for in the term-bank. Figure – presents an list of terms

The Media bank can store pictures and films which can be hyperlinked to lectures, analysis and the knowledgebase.

Student activities have two functions. The teachers can store assignments and the students can create their own film analysis.

In the following I will present the process of developing the knowledgebase, lectures and analysis, our way of thinking and the choices we made. Initially, in response to the learning needs of the Gaza students, we made clinical films related to neurological diseases of adults and ot for children. We started developing the structure of the knowledgebase, then the lectures. However, the work of most value for the students has been the presentation of analysis and of clinical films presenting OTs in Palestine (mostly) and Norway working with

clients. Simultaneously with making the content of Ergonet, we developed technical solutions for Learning-net to meet our OT professional and pedagogical needs and infrastructure and technological solutions usable in Palestine society.

6.2 Developing the software program for Palestine

Ergonet is based on the Learning-net design. The Learning-net is a Content Management System (CMS), which is the opposite of a Learning Management System (LMS). There is so far no possibility of either synchronous or asynchronous communication / discussion between teachers and students. Additional LMS computer programs like Moodle (BU) and Classfronter (UT) have to be used to enable communication with the students. This was the most suitable software programme to meet our pedagogical and professional goals. We chose the program despite some difficulties concerning ownership and technological support. We have mainly been the only developer of Learning-net in 2005-2007. I have been responsible for sorting out the interface issues related to Ergonet. Through the process we have considered and adapted several solutions in cooperation with engineers at Viatec in Bergen and computer staff at TU. These have been of different kinds such as the design, the language, quality, ethical and technological aspects related to editing and presenting clinical films on the internet, access and speed of the internet. Neither of us had computer education.

Internet access had to be available for the teachers at BU and students in Gaza. An extra internet line giving ADSL (broadband) access was installed at the OT office as this was not available at BU. In Gaza the students had access to internet in their classroom. Some of them also had internet at home. We translated the *Learning-net* to English. Because the films were in Norwegian, English and Arabic language, an option with subtitles directly on the film was developed. During this process we got feedback on professional, technical and ethical issues from one of the Gaza students with highly developed computer skills. For ethical reasons a higher level of security was installed to prevent the films from being copied. We could also store the films in two qualities by using Windows Media Encoder 9 Series when this option was available. We made a new structure and design of Ergonet to increase the user interface (EDB).

79

Working with Ergonet demanded technical expertise. Several technical challenges occurred due to the fact that the Learning-net program was not fully developed. In the first period we experienced many frustrations and wasted days trying to solve technical difficulties because of lack of fundamental technical competence among ourselves. Brey et al. (2007) describes barriers faculties have to cross when designing and/or teaching distance educational courses. When e-learning is to be implemented in distance learning, it is highly recommended to prioritise planning and structure before implementation. In this project plans and structure were made along the road because the students were supposed to move to Bethlehem. It would have been easier if the context was a bit more predictable. Most of our skills in this explorative pioneer work of using digital medium have been learned by experience and mistakes.

6.3 Ethical considerations and rights

Access to Ergonet is obtained by adding username and password. The students and other OTs can get access to watch only. Due to ethical considerations in presenting clients on the internet, only OTs and OT students connected to BU and TU have access to watch these films. The films have been locked for copying. However the written text in the analysis, lectures and knowledgebase can be copied and printed out by OTs and students in OT programs. Teachers involved in this project at TU and BU have access to edit in Ergonet together with the engineers and personnel at TU giving technical support.

When making lectures, analysing films and text in Ergonet, a policy for Intellectual Property Rights has to be determined (Bray, 2007). Norad has been the main financial funder of this project and the content of Ergonet is developed with support from NETF, BU and TU. The original films in Ergonet belong to and are stored at the OT programs at TU and BU. The written analysis and editing of the knowledgebase was done by OT teachers who have administrative rights to make changes in the program. If a person has written a lecture for Ergonet, the licence for the lecture belongs to the person. If a person has been interviewed and the content has been analysed and written as a lecture by any of the developers of the program, the rights belong to the program. Everyone who is performing in the films can at any time request that the films or film clips be changed or removed. Thanks to the technical solutions, a dynamic approach allows the material to be changed continuously. Further ethical

considerations will have to be made when access to the program expands. I will further describe our experience from our first initiative, building the knowledgebase.

6.4 Developing the knowledge base for Ergonet

Developing the content and concept of the knowledgebase has been done by the leader of the program and me, guided by the following questions: How can we present OT in a way that is in accordance with Palestinian Culture? What are the important cultural phenomena to promote? How can we structure the knowledge of ot? What knowledge is important to teach and learn? What areas and concepts are most important for the students? What is most difficult to understand by reading only? How can we visualise and simplify? How can we stimulate student's curiosity and engagement? Where to start?

The first step was to make a hierarchy of the OT concepts. The software program *Mindmap* was used for brainstorming (attachment 4,5,6). We started with the 5 basic nodes representing the key elements in OT. These were client, environment, occupation, occupation performance and occupational therapist. In addition we made a list with references and readings. This was added later because it was too cumbersome to add reference lists to each section. It became difficult to build a hierarchal system because the concepts were so interrelated. A concept such as *habit* can be described as an occupation, as central to the ot knowledge, visualised through occupational performance and as an important dimension of the client. The environment can be analysed from an outside (OT) perspective and an inside (client) perspective. *Occupational performance* is influenced by all the other nodes. After trying and failing we decided to withdraw *occupational performance* and develop the remaining 4 central nodes. Later the same happened with *occupation* leaving us with 3 basic nodes. In the following I will present our experience from making the basic dimensions of the knowledge base: *The Environment, the Client and the OT*.

The environment might support or limit the extent to which a person can perform daily occupations. Three important questions related to this concept in ot are: How does the environment influence what we choose to do and the way we do it? What factors in the environment influence occupation? What is the potential for adaptation between person and the environment? Environment branches into 3 sub-nodes: 1. Physical environment. 2. Socio-cultural environment. 3. Institutional environment. The Physical environment has several sub-sub nodes. A picture of *the wall* around Bethlehem illustrates how *built spaces* in the physical environment prevent people from participating in meaningful occupations such as going to school and work (figure 8).

Figure 8 presents an overview of the knowledgebase with the sub-sub node BUILT SPACES.

Clients are individuals who experience occupational performance problems arising from medical conditions, transitional difficulties, or environmental barriers. Questions to be asked are: What kind of knowledge do I need to get an understanding of the client's everyday life and occupational performance? What is the perspective of the client? Knowledge gained from client branches into 3 sub-nodes: 1. Motivation. 2. Habit and activity roles. 3. Embodied experience. A sub-node like motivation branches into5 sub-sub-nodes: interests, values, meaning, experience of mastery and boredom. Figure 9 presents an OT student learning how to make mosaic, a cultural craft skill that might be an interesting hobby for a person.

Figure 9 presents an overview of the knowledgebase with the node CLIENT and the sub-sub node INTERESTS.

Via Academia - focusing on the contents - Microsoft Internet Explorer er levert av HØGSKOLEN I TROMSØ

http://158.39.114.18/via-academia/front_page.do

Logged in: Rita Jentoft   Log out

ERGONET

LECTURES / ANALYSIS / KNOWLEDGEBASE / TERM BANK / MEDIA BANK / STUDENT ACTIVITIES

Knowledgebase overview

- CLIENT
  - Motivation
    - Boredom
    - values
    - **Interests**
    - meaning
    - Experience of mastery
  - Habit and activity roles
    - Activity Roles
    - Habits
    - ADL
      - IADL
    - Leisure
    - Work
    - Rest
  - Embodied experience
    - Experience of capacity
      - Subjective experience
      - Perceive - sensing
        - Sensibility / tactile sense

INTERESTS

Interests are those things that we find enjoyable or satisying to do. Interests develop over time and emerge from experiences of engaging in a variety of occupations some of which we find more interesting and rewarding than others.

Our interests usually follow a pattern. Some people are mostly interested in sporting activities while others prefer intellectual or artistic activities. Others enjoy things that challenge their skills and abilities, such as climbing mountains or trekking through desert.

Knowing what we like and enjoy to do helps us to choose how we spend our time. Our interests are often organised into routines, such as swimming at certain times on particular days of the week, or reading before sleeping. Some interests may depend on the weather

or the season.

Interests are usually associated with leisure. For some people their interests can also become their productivity. For example, artists and musicians, crafts people and the sportsperson who runs a gym.

Because the development of interests is linked to experiences there is a strong relationship between interests and opportunities for experiences. People who are deprived of experiences, for example people who live in institutions or in impoverished circumstances generally have fewer opportunities for experiences. In some cases this deprivation may be severe. Without a variety of experiences people will have difficulty knowing what they enjoy, what they don't enjoy and what they are good at doing. Engaging in interests enables us to experience pleasure and also mastery which contributes to the development of identity and self esteem.

To edit view

Internett   100 %

The Occupational Therapists main concern is the client who should benefit from her/his professional competence. Questions related to the OT are: What skills, attitudes and factual knowledge does the OT need to understand the situation of the client? The OT branches into 4 sub-nodes: 1. Related knowledge in occupational therapy. 2. Intervention techniques in paediatrics. 3. Occupational therapy models and frame of references. 4. Assessments. Different types of assessments are presented into sub-sub nodes. One of these is clinical reasoning, presented in figure 10.

Figure 10 presents an overview of the knowledgebase of the OCCUPATIONAL THERAPIST with the sub-sub node CLINICAL REASONING.
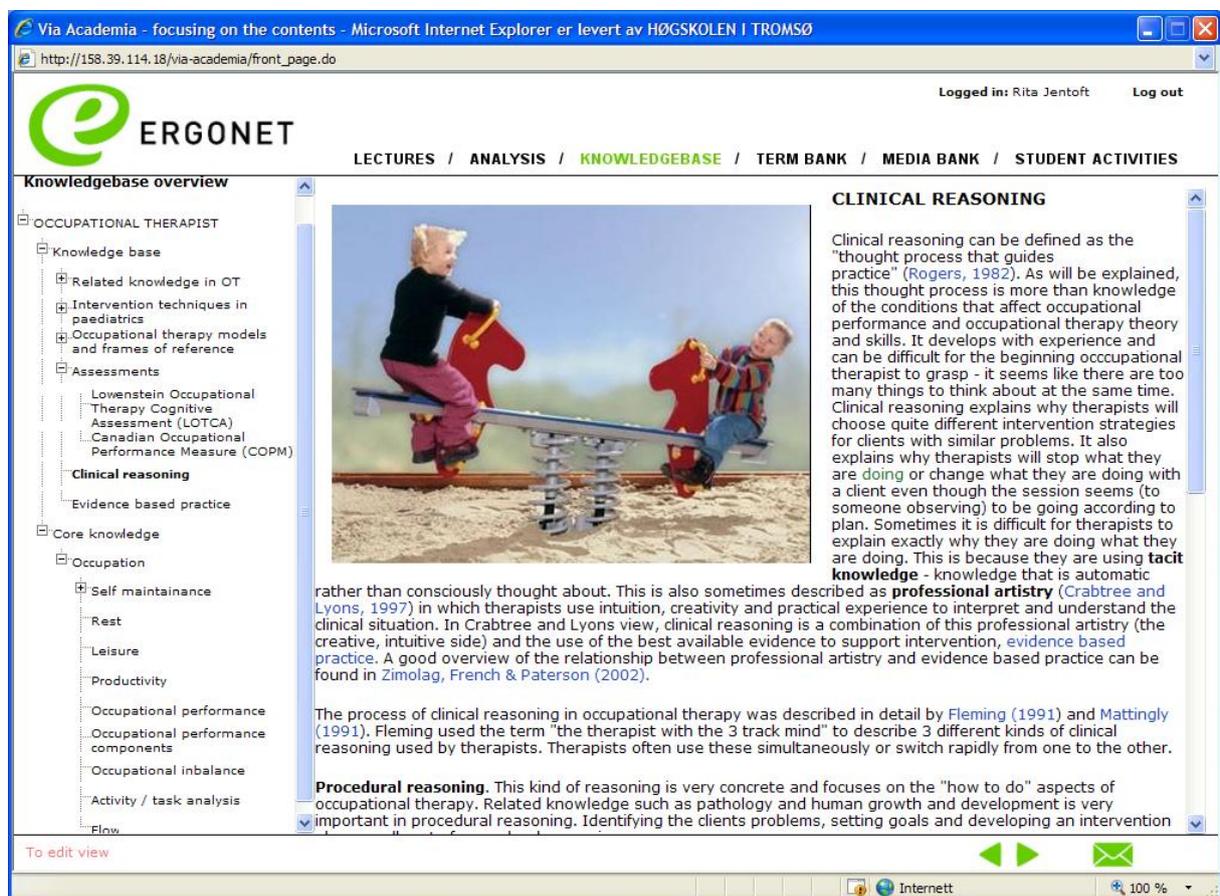
The descriptions of references and each concepts developed in the knowledgebase can be hyperlinked into the text beside the films, both in the lectures and the analysis. These can be opened by clicking on the blue word.

To work on the structure and hierarchy of the knowledgebase, the teacher from NZ and I met several times in Palestine and once in Norway. We experienced that in depth discussion was needed. We came from different cultures and educational institutions with different

theoretical foundations and pedagogical ideology. When the first tree structure was made, we divided the concepts between us to describe the concepts in depth. I worked on the client concept starting off with a definition from Webster or Oxford dictionary. I read ot books to describe factual and practical knowledge related to the concepts. This work was interesting but time consuming. I had linguistic difficulties since English was not my first language. I found it hard to exemplify and relate the knowledge to the Palestinian culture because I had not lived or worked there. I had no practical examples to integrate with the theory.

Developing the knowledgebase is from the films rather than the other way around

After making the basic, hierarchical structure of the knowledgebase, deciding the most important concepts, we started to fill them with meaning, describing each concept in depth. We found this work difficult. It was a challenge, both practical and cultural, to work separately. The NZ teacher describes her experience in the following way the work this way:

> Developing Ergonet, I do not have that much experience, but I think it is quite difficult. The obstacles are there. One of the obstacles is lack of time to discuss and think things through. I think that is a major obstacle. Particularly with something like the concepts which I think that needs a lot of thought. You can not just sit down and go tic-tic-tic and this is what we focus on really… I think it is quite a difficult thing to do. It takes a lot of time and it takes a lot of bouncing's ideas. You can not just get it all out of your head, well I can not anyway.

The work was time consuming and the concepts had a tendency to become too abstract. During this process we became aware that we followed the typical way of learning in western today. First learning the concepts and later how they can be implemented to guide practice (Hermansen, 2006; Molander, 1996). We decided to work up-side down, starting from practice, with the concrete situations based on the films made for Palestine. Through the analysis of the practical situations on film, it was easier to decide how the concepts should be described. Practical knowledge is developed from skills, familiarity with professional concepts and from watching, working with and listening to the stories of experienced masters as Molander (1996) points out. Starting with analysing films, it was easier to describe, illustrate and exemplify the knowledge. Pictures, research articles and interesting websites were added as links, presenting indebt knowledge. The NZ teacher describes this change of approach this way:

> Developing the knowledgebase is from the films rather than the other way around. Because than its kind of grows for what is needed… I find it easier to start with the more concrete and look at that, and work backwards rather then starting with the concepts and then developing more concrete stuff.

After working on the knowledgebase for two years, we still find it difficult to find a good structure: "I do not feel that we got the perfect solution to that, but maybe it will come later, maybe". This might be due to difficulties in generalising ot knowledge, because ot is client and context centred. What you do for one client in one situation differs from what you do in another situation. It takes time and a lot of considerations to develop mutual concepts across cultural boarders. However even though we put much energy and thought into the development of the hierarchical structure, it might not turn out to be that important. More important is the questions asked and the way the knowledge is described and added to the analysed films and lectures. This is practical and situated learning.

6.5 Making lectures for Ergonet

Because of the problems in visualising ot for the Gaza students, we decided to look for available educational films. We gave priority to Paediatric ot because this was the focus of the last and most important fieldwork for the Gaza students (attachment 6). Since it was difficult to use children as actors, we needed to make realistic clinical examples. I brought in several paediatric clinical educational films with Norwegian language used at the OT program at TU. The P teacher watched them and chose 2 which she would translate to English. The publishers who made the films in Norway were contacted and we got permission to use the films in Ergonet.

The films present children and adolescents with diagnoses of autism and progressive diseases. They perform different activities at home, at the school, kindergarten and at the workplace, in interactions with other people. The environment is adapted to stimulate the child to play and participate in leisure activities. The films exemplify how the child/adolescent could develop capacity, skills and learn activities of daily living. They present people from different professions working in an occupationally based way. They also emphasise the importance of cooperation and integrating of families in service promoting the values of holistic treatment.

These two films were the first to be edited and stored in the lecture element of Ergonet. We also made a lecture by interviewing the therapist of Sarah, one of the children described next chapter. She reflected around assessment and therapeutic aspects during intervention. Figure 11 presents the different situations this lecture film has been divided into.

Figure 11 presents the content of film scenes from the 3 chapter document lectures made for Ergonet

Living with Autism	Being active in school and kindergarten (Progressive diseases)	Reflection around assessment and therapeutic aspects during intervention
1. Rolf Oscar 1.1. Doing activities 1.1.1. Occupational Performance perspective 1.2. Falling in love 1.3. The girls in my apartment building 1.3.1. Meaningful activities 1.4. Too many activities 1.5. Painful feelings 1.6. Stress and relaxation 2. Gro Anita 2.1. The story of the parents 2.2. The story of her oldest brothers 2.3. The story of her youngest brother 2.4. Intervention strategy 2.5. Work 2.6. Housing 3. Roar and Christer 3.1. The story of their mother 3.2. Folkdance 3.3. Communication about feelings 4. Lisbeth 4.1. Lisbeth 1 year 4.2. Playing 4.3. Her sister 5. How to recognize autism? 5.1. Medical information 6. The End	1. Morten 1.1. Using a bench for support 1.2. The little room 1.3. Resonance Plate 1.4. Jumping suit 1.5. Swimming 1.6. Activity book 2. Vegard 2.1. Playing with ball 2.2. Standing frame 2.3. Scooter 2.4. Snoezelen 2.5. Music therapy 3. Rebecca 3.1. Making bubbles 3.2. Pictograms 3.3. Playing with ball 3.4. Pushing and rolling 3.5. Jump rope / skip 3.6. Classroom 3.7. Gym 3.8. Going home 3.9. Everyday stories 4. Fedja 4.1. Sensory stimulation 5. Silje 5.1. Lifting	1. The knowledgebase used in occupational therapy for children 1.1. Psychosocial Frame of reference 1.2. Sensory Integration 1.3. MAP 1.4. Tests 1.5. Play evaluation 2. Reflections around the therapeutic aspects of intervention 2.1. Assessment in different environments 2.2. Using natural Environments 2.3. Play and social activities The lecture is related to the assessment of Sarah, presented in the analysis.

The three OT teachers made and acted together in their first OT educational films demonstrating transferring and mobility skills (as previous described in ch.5). The media-centre at BU made a professional production, stored on CDs being available for the students. Later we learned to do the editing work ourselves. The edited film lasted max. 15-20 minutes, streamed using windows media player in high quality. It was stored at the server at TU. By using the web-address to the film, the edit function in the programme enabled us to choose the sequences we wanted present and to do the editing ourselves, to our gratification.

6.6 Making clinical films for Ergonet

I will further present our experience from making, editing and analysing the films in Ergonet and how this teaches learning and reflective practice. 3 films from the analysis are presented in figure 12. They are made in three different languages, Norwegian: Sarah, Arabic: Ahmad and English: Nicola. The figure visualises the many sequences of each film, lasting from a few seconds to 3-4 minutes.

Figure 12 presents the content of the film ANALYSIS made with Sarah, Ahmad and Nicola

Sarah, 8 years, Cerebral Palsy	Ahmad, 8 years, Cerebral Palsy	Nicola, adult, stroke
Occupational performance assessment	Assessment of gross and fine motor ability	Home visit with a client following a CVA
1. Adaptation of the workchair 2. Undressing the sweatshirt 3. Folding up the sweatshirt 4. Putting on a sweatshirt 5. Copying and drawing 6. Copying a triangle 7. Copying a rectangle with a circle 8. Drawing a person 9. Observation of grip and evaluation of writing 10. Choosing food from the fridge 11. Cutting bread 12. Buttering bread 13. Opening the packet of cheese 14. Slicing cheese and putting it in the packet 15. Spreading chocolate on the bread 16. Eating lunch 17. Making more chocolate sandwiches	1. Initiating contact 2. Interview with the caregiver 3. Transferring Ahmad 4. Moving from lying to sitting 5. Playing with Lego 6. Working on a puzzle 7. Moving on the mat 8. Playing the Xylophone 9. Playing with the Animal Puzzle	1. Moving from the car to the stairs 2. Climbing the stairs 3. Assessment - defining the problems and priorities using the COPM 4. COPM - rating importance, performance and satisfaction 5. Assessing orientation 6. Assessing visual perception 7. Assessing spatial perception 8. Assessing Motor Praxis 9. Assessing visuomotor organisation 10. Assessing thinking operations 11. Using the toilet 12. Getting in and out of the bath 13. Getting in and out of bed 14. Preparing breakfast 15. Playing cards 16. Positioning

The first film made was *Occupational Performance Assessment of Sarah*. In Norway I knew of several OTs who were interested to participate in this project, wanting to support the education of the Palestinian OTs. Ethical consideration was made, and permissions were given from the hospital, the OT, Sarah and her parents (attachment 4).

Sarah lives at home with mother, father and brother. She is in third grade in an ordinary primary school. Her diagnosis is Cerebral Palsy with spastic diplegia[15], affecting both arms and legs/lower limbs. Sarah came to the OT department at the hospital for an occupational performance assessment, together with her father. The motivation of the OT to participate in this project was to learn more and get feedback on the quality of her work. Just after finishing the assessment she criticised herself for interfering or interrupting Sarah too much during the activities. It is obvious that performing on a film for the purpose of analysing practical knowledge demands courage. Her acting and attitude was analysed by herself, other clinical OT's, the OT teachers and students. It enforced criticism, but also the chance to learn more.

At the same time the P teacher did her first clinical film of Ahmad who is 8 years old and lives in an institution for children with severe disabilities. The assessment focused on physical components of function of a child with spastic athetoid[16] quadraparesis type of cerebral palsy. The teacher played some games with Ahmad to assess his gross- motor and fine motor abilities. Afterwards she felt that this first clinical film made for Ergonet was not optimal because the toys she used were too demanding for him. She felt that it was unfamiliar and demanding to watch herself on film: "I am a person who hates to be taken a photo of, film any kind. It felt strange and different. I think it was difficult. But I learned from it". Watching and analysing films gave her feedback on her therapeutic attitude and knowledge. She continued to make educational films of assessment of children. The process helped her to tolerate being filmed and getting experience that increased her skills and planning procedures: "But of course, you have to do it and it is good for you. You learn yourselves out of it. It is a kind of good feedback for you. Next film I will do it different. I will think more. I will plan it more".

The teacher learned from observing herself on film and reflection on what she saw. This is the concept of experience based learning (Dewey, 1975; Kvale & Nielsen, 1999; Lave & Wenger, 1991; Mezirow, 1991; Schön, 1987). Reflection is a complex activity aiming at examining ones action and the situation in which they appear. The core of reflection is the separation of thinking and action (short or longer), to stop for thinking, to create a distance from one's own

---

[15] **Spastic diplegia**, historically known as **Little's Disease**, is a form of cerebral palsy (CP) that is a neuromuscular condition of hypertonia and spasticity in the muscles of the lower extremities of the human body, usually those of the legs, hips and pelvis.

[16] **Athetoid** or **dyskinetic** is mixed muscle tone—sometimes hypertonia and sometimes hypotonia People with athetoid CP have trouble holding themselves in an upright, steady position for sitting or walking, and often show involuntary motions.

experience, experienced problem and own action as described by Woerkom in (Brøbecher & Mulbjerg, 2005, p. 98). Making this distance is fundamental for learning.

6.7 Analysing films for Ergonet

After the analysis of the Sarah film was done in sequences and installed in Ergonet, I did an interview with the OT. We watched the film sequences from the assessment together. I asked questions reflecting on aspects related to her practical knowledge used in the different phases of the situations. The therapist shared her knowledge and reflections. After transcribing the interview, the text was described in the nodes of the knowledge system: the occupation, the client, the environment and the OT, as we had decided to do. However, in writing the text following the sequences, I found it difficult to organize the knowledge this way. We had problems finding the structure of the text following the analysed films. It felt unnatural structuring knowledge this way. The NZ teacher said: "I have changed a bit the model used with Sarah because you divided that in client, occupation and therapist. That has to be changed so we have a consistency. It does not have the proper organisation". We decided to write in a more integrated way, providing access to more sources, asking more questions and open up for different perspectives.

In the process of finding a better way to enhance reflection, problemsolving and critical reflection, we learned through trial and failure. After the first editing of the *Assessment of Ahmad* was done and the film sequences were installed at Ergonet, the NZ teacher did the analysis. Through this work she developed a structure for film analysis, organised in several steps. The first step was to get an overview and find the important issues to be analysed: "Initially I watched it a few times, from start to the end so I knew what was happening and could identify the main issues in this particular film clip and than going in detail". The second step was to focus on one the selected issue and follow this through. "To go in details, you just have to watch it over and over. I tapped on one of the issues and I followed this through". She did a very detailed analysis of what happened with Ahmad, who had problems with moving himself from place to place: "How was he using his body, his momentum? How were the associative reactions? How could you see those and how affected the involuntary movement his capacity for movement". The further steps were to analyse the environment and what the therapist did. The importance of modelling critical reflection and problemsolving was also integrated in the analysis by questioning: "What else could she (the OT) have done

differently. What might be a better option for Ahmad? What might have facilitated his performance better"? Several aspects could be analysed in depth. Knowledge was developed using the hermeneutic circle. When new knowledge is added the whole picture changes and promotes new knowledge (Gadamer, 1996; Nerheim, 1995; Wittgenstein, 1967). This is also important for linking practice and theory more together.

The quality of the analysis increased when clinicians and teachers shared their experience and knowledge, as many aspects of the practical knowledge may be tacit (Polanyi, 1983; Schön, 1987):

> In some way being an educator makes it easier than being a clinician. Clinicians do a lot of stuff subconsciously and automatically and they do not necessary bring those things to the surface. Sometimes I think it is actually easier for someone who is not the therapist, much easier.

The NZ teacher wanted to continue developing knowledge from the *Assessment of Sarah*: "I will be quite happy to do that… I could equally do that if that is OK with Sarah's therapist". In this way Sarah's therapist could expand her practical knowledge and her expectations for participating in this project, to learn more, will be met.

The NZ teacher concretises factual knowledge needed to be included:

> We could analyse a bit more about what Sarah actually is doing, both from a motor perspective and also a cognitive perspective. I think I just need to go over and over. I think we could do that in a more detailed way. I probably need to talk to the P teacher and just get some of her thoughts as well.

To use the assessment of Sarah in teaching, the P teachers as well need to analyse the film sequences and integrate their knowledge by reflecting on and give explanation of what is happening seen from the perspective of Palestinian ot. In other words, the analysis can be done over and over again with different OTs. It will never be completed because praxis includes more than is possible to analyse by words. When words come to an end only praxis is left. There is always something more hidden (Wittgenstein, 1967).

When the film is analysed and situated knowledge is added to the film sequences, the next step is to choose and continue to develop important concepts for the knowledgebase. The concepts are hyperlinked into the text in the analysis. The NZ teacher reflects on the value this work: "I'll find in the analysis the most interesting aspects and then linking that up to other things. Particularly in an area that I am not that experienced in like paediatrics. I have learned

quite a lot and also you remember things". Developing the content of Ergonet is interesting: "BUT, it is incredible time consuming because it has to be a 100% accurate. So this means a lot of crosschecking with books. Sometimes I use the internet and sometimes I use the P teacher because she is very experienced from working in paediatrics". It is important to have enough time and structure the time: "You need big blocks of time. Last semester when I was working one day a week, I found that it was not enough because by the next week I had lost the flow, the way I was thinking. I think it is better to do it in big blocks of time, working on it day after day". Finding time doing analytic work in a busy work schedule at university is difficult.

"Creating an e-learning experience involves a serious commitment for understanding the very different features of this medium and the way it can be used most advantageously to impact learning" (Garrison & Anderson, 2003, p. 3). To realise the potential of e-learning as an open, but cohesive system, it is essential that we rethink our pedagogy. The problem is that we get far greater access to information than we can manage. E-learning's transformative power and capacity to add value, is not based upon access. When it is required, and what e-learning offers, are better ways to process, to make sense of, and recreate this information.

6.8 Developing Ergonet to facilitate reflective practice

Being involved in filmmaking is an opportunity for strong feedback. Through the process of planning, acting, making and analysing films, a deeper level of learning occurs among the teachers. Ergonet has been filled with practical ot knowledge. It is dynamic, building on experience obtained through the process: "I think that is a developmental thing so that maybe in a year we go back to Ahmad and do it differently as well. You learn as you go along".

The films, which present a variety of approaches to ot problems, were made for different pedagogical purposes. The film presenting Ahmad was analysed in depth. It can be used as a role model, promoting master learning by observing the experienced OT performing therapy. The master reflects on her actions, asking critical questions and explaining situated knowledge through the analysis. It can open perspectives for doing things differently. The film analysis presents different cultural perspectives leading to discussions about the nature of practical knowledge and alternative ways of interfering with clients for different purposes.

Practical knowledge is not obtained through a reproduction of quantitative knowledge, skills or ability. By providing selected examples in depth, the student can obtain basic and universal knowledge, skills and attitude that is usable in different contexts. The intentions with the film analysis, is to stimulate professional competence. Developing a professional sense of decorum is related to an engagement in learning more skills and knowledge and being conscious of the impact of one's attitude in professional practice. Developing a sense of decorum among the students, presupposes an integration of two dimensions, the material and the formal, as described by Scheibel in (Brøbecher & Mulbjerg, 2005). The material is founded on the thesis that learning is created by meeting the correct professional practice. The films chosen for Ergonet are closely linked to what the teachers know are of main concern for their OT work in Gaza. We have tried to implement research and factual knowledge following these examples. The formal sense of decorum is founded on the thesis that learning is personally developed. The content is adjusted to students' learning needs, interests and recourses, and hopefully their curiosity and their motivation will be stimulated.

Making the films and watching them afterwards has enhanced reflective practice among the teachers involved (Schön, 1987): "Seeing ourselves in the film, helps us to reflect more critically and next time make changes". The two films of Sarah with a Norwegian Therapist and Ahmad with a Palestinian therapist initiated an interesting discourse of how culture influences therapeutic interaction. The Norwegian therapist thought that she had interrupted the child during the assessment, though she mostly let the child talk and act without interfering too much. When the P therapist compared both films, she commented on the difference between them:

> The therapist was basically saying nothing to Sarah and I was talking all the time. I talked through the whole assessment with the child because this is how you motivate them. It is the only way. It is how it goes here. If I did not clap or gave some sort of motivation, they would just sit there.

The Palestinian OT reflects that this might be due to her own therapeutic style and/or cultural style: "Part of it is culturally and is a matter of treatment you use. Maybe I should have done it in another way, or maybe this is how I have to do it here"? The difference was obvious and contributed to reflection among students, teachers and therapist about therapeutic attitude. In the Palestinian upbringing and culture, the use of external motivation by physical and verbal stimulation is necessary to initiate action. The children are not that stimulated to take responsibility for their actions. This approach is closely linked to behaviouristic ideology. The

behaviour is shaped or changed by stimulation or elements in the environment, not by the learner himself (Barris et al., 1988; Merriam & Caffarella, 1999). This example shows how films can be used comparatively to enhance more consciousness about how culture shapes behaviour (Dreyfus, 2001). It might also demonstrate the problems the Palestinian students had becoming self-directed learners. They have been used to and expect external motivation.

The films, both in lectures and analysis, have been analysed differently. The films in the analysis have in depth text following the sequences. Other films are more open to leave the analysis for the students. They can watch the sequences in the analysis, reflecting and answering questions raised by the P teachers like: "What do you think the OT was assessing in that situation? What do you think about the activity she used? How is it different and why"? They are stimulated to obtain knowledge by asking them questions where they find the answer in the lectures: "The lecture will help them. They could use it as a resource". Other films are without text because the film visualises knowledge so well. The text of the Norwegian films in lectures presenting autism and progressive diseases among children and adolescents is the translation from Norwegian language. From the spoken words important concepts are hyperlinked in the text from descriptions in the knowledge-base. These concepts have been illustrated with pictures and linked to relevant web-addresses and articles. The films, presented in a different language, emphasize observation skills and the ability of describing, reflecting and analysing.

6.9 Summary

The intention has been to present the options of Ergonet and our learning process when developing it. The teachers had experienced that making their own films stimulated reflection and expanded their practical knowledge. The films should be open for critical reflection, reflection and problemsolving. The students can also contribute to develop the content of Ergonet. The teachers can give them exercises related to these films. Ergonet is not to be recipe based and perfectly described, presenting the correct way of acting: "We do not have to do it perfectly. The most important thing is that we learn from it. This is also a role model for the students". According to Biggs (2003), the good teachers reflect on the things they are doing wrong, and learn from it. Sharing reflection can broaden up peoples' perspectives, making it not too narrow, not too perfect. That is a sort of action learning, learning from

experience. The P teacher said: "I am thinking that seeing ourselves in the film, helps us to reflect a bit more critically and next time make changes".

To develop critical thinking, the students need to reflect on what they can do differently. To promote self reflection among the students the teacher must act as a role model and question their own performance. The students are used to seeing the teacher as the expert. The P teacher reflects on what will happen if she starts asking questions such as what she was doing wrong or could have done differently: "I think that they will be shocked from this question. Because they think that I do everything perfect. They think I will think about myself as perfect". She feels that the work of developing Ergonet has helped her to develop her teaching: "Even there is more work to do to develop Ergonet; it is still a very useful tool. Ergonet is helping me a lot". By watching and analysing films, acting as therapist, she has obtained in depth knowledge about her attitudes and knowledge. From the process of starting with educational film, continuing with assessment of children, her tolerance of being filmed has improved. She values the feedback she gets from seeing herself at film: "You learn yourselves out of it. It is a kind of good feedback for you".

In the process of developing Ergonet the teachers' practical knowledge has been described, analysed, structured and visualised. Their experience has constructed learning. The basic value in the learning process of adults is that meaning and experience constructs meaning. Constructivism manifested in adult learning has an experiential orientation, self-directed learning and a reflective practice. It posits that learners construct their own knowledge based on their experience (Merriam & Caffarella, 1999).

The teachers ability to reflect, analyse and problem-solve has expanded in the meeting of theory, filmanalysis and production of text. How can they use their own experience of developing Ergonet to facilitate practical knowledge among the students at the OT program at BU? The content and access to Ergonet might be of importance, but the next important question is how it can be used by the students to promote self-reflection, critical thinking and problemsolving, necessary for obtaining practical knowledge? I will now present how the teachers used these experiences to implement Ergonet in teaching of the Gaza students.

95

7. IMPLEMENTING ERGONET IN PRAXIS

In this chapter I will present the teachers' experience from using Ergonet in teaching for the Gaza students. Paediatric ot was the main issue in the last practical skill course in Egypt (IV) and the last clinical fieldwork (VI) in Gaza. The overall pedagogical goal was to facilitate practical knowledge in paediatric ot through self-directed learning, critical reflection, reflective actions and problemsolving. The teaching method used for the students was to explore Ergonet and make their own films when working therapeutically with children.

7.1 Making clinical paediatric films and exploring Ergonet

Since most of the OT workplaces in Gaza are related to children, obtaining practical knowledge in this area was of major importance. On the second trip to Cairo, the teachers were able to observe the students interacting with children during a one day fieldwork in an international kindergarten and one day in a clinical centre. Some of the students showed good therapeutic and interactional skills, other got feedback how to improve their skills. The teachers observed that most of the boys had difficulties initiating contact and playing with the children. This surprised them because the students come from fairly large families with a lot of children around. The students' hesitation could be cultural. It is not typical for older boys to play with small children: "But I think it will go away with practice", said the teacher. During the course of the lifespan people are provided with a personal sense of decorum developed when our behaviour is exposed to responses given in different circumstances. These experiences are created by the society and are saved in-body as habitus, conceptualised by Bourdieu (1990). The students will bring their in-body experience into new circumstances and this will influence their interpretations and their understanding of different situations. Through a therapeutic education a more professional sense of decorum, with attitudes, knowledge and skills desirable to become a professional therapist, have to be integrated. This demands situations where these habits can be embodied, such as paediatric fieldwork supervised by OTs.

We had to use some different ways of teaching given the logistic difficulties
The practical skill in Paediatric OT was, as described before, arranged in 3 phases with lectures, skill-training and demonstrations. First the students followed videoconferences

lectures in Paediatric ot focusing on medical and ot based factual knowledge. The teachers use their own experience to exemplify and apply the knowledge to practical situations. The students had access to Ergonet for the first time. Here they could look at lectures and analysed films presenting practical knowledge and follow the actions of experienced OTs. The teachers also demonstrated ot with children on videoconferences. Functionally and practically the teacher found it extremely difficult to demonstrate assessment and therapeutic strategies working with children in the videoconference classroom. It was difficult for the child to stay in a specific area and communicate with the students on television: "We had to use some different ways of teaching given the logistic difficulties". The teachers decided to use an opposite strategy: The students should demonstrate their knowledge for the teachers and get feedback from them by making their own film. Hopefully this would be a useful strategy to heighten the students' engagement and to facilitate a deeper approach in learning. According to Biggs (2003) and Marton and Booth (1997) engaging students in learning to a higher extent, is a usable strategy to choose in making learning more meaningful.

The students were told to videotape themselves doing assessments with children. The teachers had no experience in using film for the purpose of documenting and evaluating students' skills during practical fieldwork, so they did not know what to expect. However getting the films to the teachers at BU presented a lot of logistical problems due to the closure of Gaza. The teachers analysed and graded the assessment film and gave the students very detailed feedback. Ergonet became a role-model for how practical knowledge could be analysed. Analysing and writing feedback to the films lasting for 45min to one hour, took them more than 3 hours: "It was incredibly time consuming, extremely time consuming". In the next assignment the student planned and videotaped an intervention film with the same child from which they got feedback from the teacher. The students brought these films to Cairo to work with analysis on the last skill course. Only half the group was allowed to cross the border, this time it was due to Egyptian restrictions.

You can not just send the students off to use it

The first exploration of Ergonets' possibilities as a medium of professional knowledge in ot was done at an internet café with children playing around. According to Schön (1987), reflection needs time and room. It is related to situations and is developed in supportive environments in which reflective processes can flow. The internetcafe was not an ideal place for reflective learning, but was the only available place since the hotel they stayed in did not

have access to internet. The students did not seem familiar with Ergonet, indicating that using it on their own had not been successful. Even though they had had access to Ergonet for some time before the last trip to Cairo, most of students had not looked into Ergonet at all. The others had been looking superficially. This experience led to the conclusion: "You can not just send the students off to use it". The NZ teacher explains why:

> I think we probably will learn from Cairo that you actually have to incorporate it in to the classroom teaching as well. Because, it's like giving them a chapter in a book to read, unless you follow it up with something in the classroom, they do not get it. So it is the same thing. I do not think they have this very highly developed capacity to work on their own and really synthesize information whether it is from a book or the internet or the Ergonet. So we really needed to be there to work with it.

Kanuka and Anderson's (1998) research on the depth of online interactions found that students' interactions in the online environment were primary at the lowest level of communication and rarely developed into a higher level. This is confirmed by Thomas (2002) who found that the internet learner picks up more and more correct features, but does not integrate them. This could be due to unfamiliarity with the field and that time was spent on learning activities instead of discussions that could facilitate high-level cognitive engagement. Vygotskij (1978) claims that students only learn when their current view of knowledge is challenged, reformed, and synthesized through their interactions with others. Even though Ergonet was made very sophisticated, it was just like another interesting film. It is not enough to watch what the others have done, you have to be active yourselves.

To enhance high-level cognitive engagement in learning, the teacher and students explored the film Analysis of Sarah (Norwegian) and Ahmad (Palestinian). Facilitating reflection, critical reflection and problemsolving was of major concern. The objective was to go through the analysis, looking at how the text described the different phases of the assessment and reflect on how the therapist worked. This enhanced reflection among the students. According to Schön (1987), reflection is to be confronted with something new and the person needs individual support to make thoughts visual. The student's reflection-in-action can be supported by the teacher by asking questions like: How to understand the situation and actions? How to understand the problem? What are the possible choices and reasoning for actions? The teacher shifted between broad perspectives and details, integrating practical actions and theory in the analysis. She thought that this process: "was very helpful for them, to a certain level".

At this stage 3 different strategies had been used to facilitate and situate practical knowledge among the students. They had learned from planning and making their own clinical films which the teacher analysed and gave detailed feedback on. This gave them an idea of how it could be done. The students had access to Ergonet on their own. Situated knowledge was presented in the analysed films and the lectures combined with factual knowledge. They had explored Ergonet together with the teachers. These were strategies to enhance learning in getting to a deeper understanding of how they could do their own analysis of practical knowledge, which was the next strategy.

But when you can see it quite clearly, you got evidence

The pedagogical goal for the paediatric ot skill course in Egypt was to enhance the students' practical knowledge by facilitating reflection, self-reflection and problemsolving. The procedure of analysing the *Assessment of Ahmad* was used as a model for the next student exercise. The students had to analyse 5 minutes from the intervention film. They expressed that writing analysis of their own film was easy work: "They expressed that this was a waste of time, they had already done this". They considered that their knowledge in doing the analysis was sufficient. Jarvis (1995, 2004) names this attitude presumption thinking. It leads to non-learning. This was confirmed by the teacher: "They did a two pages written description saying that the therapist did this, and the child did that". The students described their observation in a superficial way, without analysis or integration of theory. There was a huge gap between the students' presentations and the teachers' expectations of doing an analysis. The students' cognitive skills in learning were still at a low level. The teacher expected them to use high level cognitive skills such as those described by Biggs (2003) and Marton & Booth(1997), where they analyse, explain, relate and apply knowledge occurring from the film.

The P teacher told them to work harder, to ask more questions and be sensitive to their lack of knowledge: "I gave the message that you really need to work on that. This is your responsibility". The P teacher told the students to work on their problemsolving skills, to seek more information and ask more questions. Curiosity and problem solving is part of action and human life, developed from childhood. Through the process of problem-solving you have to go behind the obvious problem. You have to broaden your perspective to find what is hidden, as described by Brøbecker et al. (2005), Gadamer (1996), Nerheim (1995) and Jentoft (2003).

If they don't problem-solve, seek information and ask questions, this will be a major problem for the students in the next fieldwork and even in the future: "This will always put you behind someway. The supervisor will not know your need for learning". Her direct communication might have an impact on their attitude: "They felt insecure immediately and a lot of them started asking questions".

In the students' films there were important therapeutic aspects that needed to be discussed and corrected due to misdiagnosis. The students had fallen into quite a lot of the traps students usually fall into, though usually at an earlier stage: "They were superficial and they latched on to a problem or a way of dealing with the child and then they kept persevering on that. Some of them completely misdiagnosed the problem and did not pick up important aspects". The teachers had to find other strategies in their teaching approach to enhance self reflection among the students. If they could not see what they did wrong, reflect and ask questions, non-learning would be the result. They spent the whole evening analysing sequences of the students' intervention films. The next morning they started working with the students films in the classroom analysing the cases most obviously misdiagnosed. The students defended themselves as usual: "No, no, no, no. That is not right. This was wrong". The students' non-consideration still led to non-learning (Jarvis, 1995). They wanted to do the work the way they were used to doing it.

To enhance their understanding, the teachers gave concrete examples from realistic clinical situations in which the students had more knowledge than was being seen on the film-sequences. One of the films presented a child who was very unresponsive. The student put a rattle in her face intensively which the child indicated that she disliked. The teachers stopped the video, looked into the sequence, and said: "Just look. This is happening and this is happening. How can this be the problem"? Using this strategy made a change and the students started to accept feedback: "But you could see it, on the film. When we looked at it and went through it frame by frame, I think she/he could understand that". Another example was a student whose whole focus was set on how ataxia[17] was affecting a child: "But the ataxia was not the big problem in terms of his function. The big problem was his sensory problem and

---

[17] **Ataxia** (from Greek *α*- [used as a negative prefix] + -*τάξις* [order], meaning "lack of order") is a neurological sign and symptom consisting of gross lack of coordination of muscle movements. Ataxia is a non-specific clinical manifestation implying dysfunction of parts of the nervous system that coordinate movement, such as the cerebellum. Several possible causes exist for these patterns of neurological dysfunction. The term "dystaxia" is rarely used as a synonym.

judgement problems, all this cognitive, perceptual things". The student also had problems accepting the feedback until he observed his own misjudgement on the film. The teacher explains why: "When you can see it quite clearly, you got evidence. Saying this is how it is because, look you can see this on the child".

This was the first time the teacher experienced self-reflection or self-reflection among the students. They had started to accept feedback. This change was related to the way the teachers went through the student's own video and analysed it step by step: "Then they were going to take it…It is the first time they started to say "Oh my god, that's right". According to Mezirow (1991) reflective actions are based on a critical assessment of assumptions. The person has to stop and ask what he is doing wrong. Critical reflection goes deeper, criticising the foundation which our convictions are built on. Since it is related to habitual learning, changing learning strategy demands a dramatic change in the way the students see themselves and the world they live in.

These kinds of reflective problemsolving questions

Working physically together in the classroom was of major importance for establishing a mutual understanding: "It really was not before we were in the classroom... I think it was only then that they could see the difference between the way that they were thinking and the way we were thinking. Not only the way we were thinking, but the way we were looking". The students were still at level 2, according to Dreyfus (2002). The advanced beginner begins to understand the relevance of the context. She/he begins to note perspicuous examples of meaningful additional aspects of the situation. It is important for the teacher to supervise the student to pick out and recognise relevant aspects to make sense of the material, also in Ergonet. Supervision became an important strategy for in depth study of the situations. Schön (1987) claims that the most important activities in supervision are: to demonstrate (be a role-model), to supervise, to ask questions and to be critical. Reflection is related to unsecured aspects. Learning environments where trial and failure are accepted, with trust and security in systems, supports the students' reflections. The teacher noticed a change in the student's reflection and problem-solving strategies. They started looking closely and asking questions like: "Was this the right thing to do at the moment? How can I do this differently? What kind of things do I need to change for the client to be more functionally, to be with less functional problems"?

By using the clinical videotape, the teachers and students had a mutual platform for shared understanding: "Yes, I think it was very helpful". They all became deeply involved in conversation and the lecturing in the group. Scardamalia (2008) states that teaching has to facilitate cooperation and collective responsibility. Students have to understand how professional competence is to be developed both individually and as a group. The teachers were able to engage students in the collaborative solutions of knowledge problems. The responsibility was now shared by the students and teacher instead of being borne by the teacher alone. The teaching had facilitated cooperation and collective responsibility in understanding how professional competence can be developed.

The teachers and students had managed to establish a platform for shared understanding. According to Schrage in (Garrison & Anderson, 2003), deep involvement in conversation differs from just exchanging information. The words are different, the tone is different, the attitude is different, and the tools are different. During the two weeks in Cairo they had a lot of discussions related to the scenes in the film. One example is a child with ataxia eating a bowl of rice and yoghurt, not mixed. The child did not perceptually get the idea of mixing the rice himself. The teachers suggest mixing the rice, making a number of advantages for the child. The texture will stay in the spoon better and be easier to swallow: "We are trying to get them to see that it was not a single recipe, because this is what they want". The teachers started to broaden up different perspectives, acknowledging different ways of looking, understanding and different handling telling them:

> That it is never one solution or one way to do something. There are always several and what you have to do is to identify which is the best option. That means looking at if I do this, this would happen. If I do this, this would happen which is going to be the best in these circumstances. We try to highlight that. We raise it when we are looking at the analysis. With this child, there would all be kind options, but one will be better than another? One might get you to the kind of output that you want in a better way for the child and to make it easier for the child.

Since the students had changed their defensive attitude, they could start to highlight reflection and problemsolving by continuing using flexible forms of learning. The students had learned to evaluate their own actions which is essential to reach the third level of Dreyfus's (2001) skill hierarchy, the competent student.

I think that changed a bit, which… was a bit of a miracle.

Several factors facilitated the change. The students had videotaped themselves and their own clients. They had access to Ergonet for observing OT's assessment over and over again. They got in depth feedback from the teachers on their own films and analysis. The dialogue between teachers and students when analysing the films was of major importance. "Because we worked with them and showed them this difference, they started to realise that the content of the analysis was more complex than they thought they could just read". The students had started to use a deeper approach in their learning strategy as described by Biggs and Marton (Biggs, 2003; Marton & Booth, 1997). They had started using self-reflection.

The teachers carefully reflected on the impact the change might have:

> I would not describe it as a major change… I think it made a difference and it probably is the only factor that is different… I think it was a shift there, I hope at last… If it will last even for the two or three of them that would be a major victory I think... I think in this situation it added something that we just could not provide in any other way really.

The teacher expresses uncertainty related to the sustainability of the change. The students probably needed more time to implement this new awakening:

> If the students had another year and we could do it this way we could have made a more significant difference. It might be that it is just too late with this… I do not know how long it will last. But I think in the circumstances, it was probably the best we could do. I think they realised that it was not as easy as they thought. I think that changed a bit, which… was a bit of a miracle.

According to Mezirow (1991, 2000b) our meaning perspective is established through experiences through childhood and the process of socialisation, in relation to parents and teachers. The more intense and repeated, the deeper and more habitually established, the more difficult to change, as it was for the Gaza students. However, transformation of learning occurred after a long process of resistance. The questions the teachers asked just after the skill course had come to an end were: Was it too late or will it last? "I think ideally, you need to use it with one cohort of students for the four years. I think in that way, you will get a kind a picture of how useful it was". Answers to this question will be given through the final clinical placement in Gaza. The students will have to continue developing their ability to reflect critically on their professional knowledge.

Another aspect was how the remaining 5 students in Gaza could change their learning strategies since they had not been through the same learning process. Because they had to do the analysis on their own: "It would be interesting to see if there is a difference of the 5 students that went to Cairo and the five students that stayed in Gaza". The students went back to Gaza to start on their final cohort, including paediatric fieldwork. Unfortunately in the summer of 2007, the political situation in Gaza got worse. The 5 students spent two months in Cairo before being able to return to Gaza.

7.2 Facilitating practical knowledge in the final fieldwork

The final fieldwork in paediatric ot lasted from August to October 2007. Clinical supervision was given inside Gaza by a specialist in physical medicine, a rehabilitation consultant and an OT. From BU they were followed up by two P teachers using flexible forms of learning such as videoconferences, telephone, internet and Ergonet. The students had to make 3 videobased assignments based on therapeutic work with children and analyse the films by adding relevant theory in a written documentation. Their analytic, reflective and problemsolving skills increased to a higher level during this learning process.

There was a difference between the group who was in Cairo and the group remaining in Gaza: "I can sense that the students who came to Cairo are discussing everything in detail with me now". This was a major and important change. Related to the positive experience from Cairo, the teacher felt that the remaining Gaza students had a disadvantage: "I think they felt a bit lost. I think that they themselves see the difference among them. I was really angry and sad that the others students did not manage to come to Egypt. There was a golden opportunity to do something different". The remaining students got extra support to catch up with the rest of the group.

Through the last fieldwork the students expressed their need for clinical supervision from experienced OTs: "Their clinical supervisors were not so familiar with what they were doing, so they felt a bit lonely". The lack of experienced clinical OTs in Gaza could not be solved by the teachers, but they increased their presence by arranging more supervision by videoconferences. According to (Garrison & Anderson, 2003, p. 29) teaching presence has an influence on students' cognitive presence. Ergonet was designed to facilitate cognitive and

social processes. The purpose was to realise personal, meaningful and educationally worthwhile learning outcomes, of facilitating practical knowledge. The teachers had to balance between the needs of the students and the learning objective of becoming a professional OT at a Bachelor level. The teacher also had to model critical discourses and reflections by constructively critiquing contributions. The assignments of the students and the content of Ergonet were a shared contribution where this could happen.

Five of the students failed on their first assignment and had to redo it. Some of the Gaza students were using Ergonet as a support during the fieldwork. However for the students who failed, the teacher had to remind them of the existence of Ergonet. According to Vygotsky (1978) learning ocurs only when the students current view of knowledge is challenged, reformed, and synthesized through their interactions with others. The teacher acknowledged that they had to be more present and actively engage the students of using Ergonet. One strategy was to put the assignment on Ergonet to force them using it. The students who failed had the same problems as previously described among the Cairo group. They had misdiagnosed the problem of the child, the analysis was superficial and they did not pick up important aspects. The students had to redo their work and the teacher used the same process of analysing films with them. To look into the sequences in the film, reflect and analyse the sequences frame by frame. Important change happened again: "This is when I think they realized that there are a lot of problems". Self-reflection is important for developing knowledge, sensitivity and conscious reflection on how our values and attitudes effect the situations. Berger and Luckmann's (1967) approach to self-reflection is called "a mirror response" to the attitude of the other; a way of reflecting on personal behaviour in encounters with patients. By using the film, the student could study their interaction with another person. Seeing them self at the film and reflecting together with teachers, brought about an important change in facilitating critical thinking, and through that a possibility to obtain practical knowledge. It was a transformative learning change (Mezirow, 2000b). The clinical films became a catalyst for reflection and learning. The key to success was found because the quality of the next assignment improved highly. For one of the students there was a total shift: "He was really getting it. That was really a perfect assignment".

The contact between the P teacher and the Gaza students improved during the last fieldwork: "I think it is getting more and more a direct relationship". The learning outcome from the second assignment showed that critical reflection and the ability to give each other proper

feedback was enhanced. This was due to the pedagogical strategy used. The students' assignments were presented for all Gaza students on videoconferences. There was a shift in the way they worked on critical evaluation and feedback to each other: "A major change yes, yes. I am happy about this". Making this change was a big challenge for the students because they tended to take things personally and had difficulty with professional and constructive criticism. The students had to work on their observation skills, describe the positive first and avoid negative and personal views. This process helped them to become more concentrated, more reflective and critically evaluating their work. According to Garrison, Andersen (2003) attention must be given to establish and sustain appropriate social presence if the full potential of e-learning is to be realised. The teachers managed to establish social presence among the students by letting them share and analyse each others films by using the internet and videoconferences. Social presence is the ability of participants in a community of inquiry to protect themselves socially and emotionally, as *real* people (i.e., their full personality) through the medium of communication being used. When social presence is established, cognitive presence can be enhanced and sustained (Garrison & Anderson, 2003). This is difficult using text and the Web only. Social-emotional communication in text-based communication is possible through the use of compensating strategies, such as videoconferencing practicing giving positive feedback. The students needed to discuss the assignments. They needed supervision to understand how to treat different patients. They also needed to practise on skills they wanted to improve. An online internet discussion group was arranged to meet these needs where all the students could ask questions and share information. Management was taught on videoconferences with both BU and Gaza students. The on-campus and off-campus group also had contact on internet on a social basis. This helped them to feel more socially included, of being a part of their cohort.

The students had become reflective practitioners. They had managed to combine factual knowledge and practical skills. This unity is important, according to Molander, for obtaining practical knowledge. One of the most important strategies to make the change happen was changing classroom teaching to enhance reflection: "You need to do this shift from spoon feeding, without thinking". Another important aspect was that the students had to re-evaluate their work by the use of video. The P teacher said: "The video helped me a lot to do this. Because if we were talking about this without seeing it, they would not be much convinced. Because they were seeing themselves and other colleagues doing things, I think that helped

them to get into details and reflect on what they observed". The students also stopped blaming the teacher and took more responsibility of their own learning.

The film made the problem-solving skills of the students more observable. Their problemsolving strategies have helped them to broaden their view, changing focus from functional components to a more holistic perspective. It could be seen in the way they designed their treatment profile and used activities in a therapeutic way. The interfering with the patients has shifted and they focused more on themes like adaptation, integration and social roles. This was a transformative change in learning crucial to reach the third level of Dreyfus's skills hierarchy, to become *the competent student* mastering using the rules. He/she has to manage noticing different elements central in action and evaluates them when they are inappropriate. Because the student will still face problems in changing direction, the teacher must help the student to make a plan, make priorities and modify and use the rules. Most students finish at this level when they have learned to evaluate own actions (Dreyfus, 2001; Dreyfus et al., 1986).

The transformative learning change is related to several factors. Being able to watch the films and analyse repeatedly, having written feedback from the teachers related to their own films was helpful, but not enough. Most important for change, however, was the intervention films the students made themselves and analysed together with the teachers. The films represented a sort of mirror for their own embodied and situated practice, which became a source of learning where they could stop and look into sequences. Research by Aars (2006) shows that students become more reflective in learning from making and analysing their own films. Ramirez Martinel (2008; 2009) found that learning becomes more flexible, personal and active by making films, compared to the outcome of using educational films, role-play/workshop. The P teacher was pleased with the end result: "There was a total change in some of their analysis, in their result and in the skills they demonstrated with the client". At the end they had a practical skills exam on videoconferences in which they discussed details related to their films. The students also had to demonstrate transfer skills with a different "client groups". They worked together, using dolls to demonstrate neurodevelopment approaches and training in dressing and undressing. They all passed the exam: "Most of them did well and three or four of them presented a really good problem-solving strategy in the way they offered clinical treatment to their clients. Two of the students that did not come to Cairo were really fantastic. They gave a wonderful assignment". Two of the students, who were in

Egypt, also had major improvement in the quality of their assignments. The P teacher was pleased with this end result compared to the situation just a few months ago: "Two out of five is a good number for me. There was a total change in their type of analysis, in their result and in the skills they demonstrated with the client. Their assignments were so good".

The total result for the group was as for the average group. Two or three are excellent, five are in the middle. Two-three are a bit below and need extra support after graduation: "They know that maybe some of them are not still at the level of practice alone and they still need help". The teachers were doubtful about letting all the students pass the clinical fieldwork. They needed more practice with clinical OTs, but in Gaza there was nothing because of the lack of OTs: "If we had had more practical, more clinical role models, I think that we had better results with them". The university offered support after graduation because 80% of the students' asked to be followed up. The students knew that some of them have a problem and that they will need help. This was due to a closer social contact, founded on trust: "This means that it is a close relationship now. When you are close to someone, when you know them better, I think this is when you ask things from them and help from them". It was of major importance that the students felt included and that they needed support. Trust was established which is of major importance related to Schön (1987) because reflection is related to unsecured aspects. Learning environment where trial and failure are accepted was created.

8. FINAL SUMMARY

This project was initiated to promote the development of practical skills in Palestinian OT education. Practical skills are essential knowledge in ot. It is a situated and experienced knowledge, a knowing how and from within the situation (Nortvedt & Grimen, 2004). This project has exemplified the challenges the teachers have experienced to facilitate practical knowledge in the learning process of a group of OT students in Gaza. Travel restrictions and an unstable political situation has separated teachers and students. Insufficient learning strategies made it difficult for the students to study on their own. Without clinical OTs in Gaza to demonstrate and supervise the students, it became impossible for the students to learn how to deal with the very complex practical situations they met in practice.

Practical knowledge is situated and embodied (Alve, 2006; Merleau-Ponty, 1994). It is difficult to obtain by reading only. In this action research project the teachers at the OT programme at BU were forced to implement e-learning in education to support isolated Gaza students to fulfil their education. Educational technology like videoconferences, internet and films became new and necessary tools. To what extent have we reached our goal supporting the students to obtain practical knowledge by using flexible forms of learning and developing and using Ergonet? Have the methods and tools used helped them to become more reflective and self-reflective in their learning strategy? Has their ability in problem-solving been enhanced?

During the period of this project (2005-2007) the learning strategies in the OT education related to practical knowledge, has changed gradually. The students ask more questions, are seeking knowledge through internet and library and analyse the use of knowledge. They depend more on their own judgements in clinical situations and are becoming more independent. Their professional thinking has become more critical. Their preferred learning strategies have also changed. They dislike teachers doing a course *the traditional Palestinian way,* not including reflection and integration of knowledge into practice. They prefer more active work using their analytic skills in observation, analyse and interpretation, and tying details together. Being introduced to, and able to apply knowledge to practice, they feel special at the university. Some of the other teachers also give positive feedback to their studying skills and ability to implement factual knowledge in action. The teachers appreciate

the positive feedback from others and feel proud: "They see that they are different and it makes me feel proud". Because the teachers **had to** find and try out new ways of teaching practical knowledge for the Gaza students, they have got an experience they will continue to use after this project is over: "We are now the heaviest user of the e-class in the university".

One of the first actions implemented was the use of video to evaluate students' practical skills. Both Gaza and BU students had a videotaped exam where they demonstrated their ot skills with teachers and actors playing stroke-patients. In the evaluation of their performance there was a gap between the one from the teachers and the students' self-evaluation. The students were upset because of the low grades they got, and they were not able to understand why, even when their teachers explained. This action demonstrated students' problems with critical reflection or self-reflection. Reflective actions are based on a critical assessment of assumptions. Critical reflection evaluates the foundation of our convictions. Mezirow (1991, 2000b) claims that conscious and unconscious habitual expectations have to be explored because they play an important role in shaping actions and creating meaning. In this case the students were not able to do so. According to Mezirow and Garrison & Anderson (2003) transformative changes in learning demands creativity, initiative and hard work from both students and teachers. The teachers must be role-models who facilitate discourses and reflections by constructively critiquing practice.

An important part of the learning process is to develop self-reflection, to train students to see themselves from an outside perspective. Self-reflection is important for developing knowledge, sensitivity and conscious reflection on how our values and attitudes affect the situations. Berger and Luckmann's (1967) approach to self-reflection is called *a mirror response* to the attitude of the other; a way of reflecting on personal behaviour in encounters with patients. When the teachers and students looked at the film together and discussed their performance together with the teachers, a transformative learning change happened. By using the film, the student could study their interaction with another person. Seeing themselves in the film and reflecting together with teachers led to an important change, facilitating critical thinking, and through that a possibility to obtain practical knowledge in a new and sustainable way. It was a transformative learning change, a meaning making activity, as Mezirow (2000b) points out. The videotaped evaluation became a catalyst for reflection and learning for the BU students. Looking at the film and discussing it together with the teachers helped the students to understand their experience. However for the Gaza students this strategy was insufficient.

110

They had insufficient skills and the film of them selves working with the OT teachers role playing patients did not seem to facilitate critical reflection on their performance.

Production of Educational films was chosen as a way of overcoming the problems of teaching and learning practical skills. One educational film demonstrated transfer techniques with stroke patients. The students got a copy to study, reflect upon and practice on their own. Experience from using this film was that the BU students highly appreciated learning from the film, they memorised the technique and managed to perform the practical skills. However they were not able to adjust the technique when the context changed meeting new "patients" with different problems. Their knowledge was rulebased. The Gaza students, who also got the film, did not seem to be able to work on their own. The P teacher confronted them and challenged them to take responsibility for their own learning, and not only blame the circumstances. Their resistance to learning was obvious. They seemed to have come to a situation which Jarvis (1995) describes as non-learning. The teachers seem to have lost their authority. This was a dramatic situation. One year before graduation the teachers doubted that the Gaza students would attain sufficient practical knowledge to be able to graduate and practice on their own.

Rote- learning and memorising is firmly established at all levels in the Palestinian educational system. Evaluation and exams measure factual knowledge and the learners are expected to use surface approaches, like memorising, in learning. Blair & Randall show from their studies among leading headmasters that this is due to the absence of a guiding philosophy of education, poorly trained teachers, political obstacles and economical factors (Blair & Randall, 2002). Deep approaches like reflection and problem solving skills are not emphasised and therefore basically unfamiliar to the students. This often results in passivity, teacher dependency, lack of creativity and problem-solving, which Biggs (2003) refers to as low-engagement and surface learning. He also refers to the studies of Ballars and Clanchy (1997 in Biggs, 2003) findings that international students from non-Anglo Celtic cultures like the Middle East, are too teacher-dependent, too uncritical of the material they have been taught and prone to rote-memorisation. Biggs points out that instead of making stereotypes, focus should be set on practical teaching which is usable to get all students to use the highest level of engagement where they explain, relate, applying and theorize.

The students' attitude towards learning challenged the teachers to use the films in a different way, to facilitate reflection and problemsolving. Their experience from the students' reactions on the educational films had a great impact on the way Ergonet was developed. It was based on real patient situations to support OT students to achieve a deeper approach and practice rooted in their learning strategies, developing more reflective actions and a critical reflective way of thinking and thus achieving more transformative learning. This in accordance with the perspectives of Biggs (2003), Garrison & Anderson (2003) Mezirow (1991) and Marton & Booth (1997). In Ergonet practical knowledge was presented and analysed in a cultural context. Educational and clinical films were made visualising and highlighting ot practice, opening it up for reflections and knowledge.

The internet based learning program Ergonet was developed for the purpose of structuring ot knowledge in Palestine. Occupational Therapists have served as masters or role-models, as storytellers analysing practical knowledge in a self reflective and critical way. Films were made, stored, analysed, and combined with relevant knowledge. The professional and pedagogical intentions were to reduce the gap between theory and practice and the cultural one between Palestinian and western OTs. The teachers experiences from making their own films, analysing them and developing the knowledgebase, had an impact on the way Ergonet was used in teaching. According to Molander, practical knowledge is obtained through the intersection of 3 aspects: practicing skills, learning the OT language and working together with more skilled OTs to create an identity of the profession. This was implemented in Ergonet: 1. In order to create an ot identity, the students could look at OT masters in Ergonet and how they interacted with clients. 2. They could look at the way they performed skills in interaction, communication, assessment and therapy. 3. They could learn the professional culturally based concepts following the actions in clinical practice.

The action research approach lifted the process. The students were given assignments proceeding the same way as the process of developing Ergonet. They had to make their own clinical films, analyse them and add experience based and factual knowledge to the situations. Through this process they had to practice problemsolving and reflection. They had to develop their thinking, planning and performance skills and describe professional concepts following the actions. This strategy was the key to success. Clark (1983) claims that the important key to success for distance students is to participate in active learning. Only active interaction is a significant indicator of an online student's perception of their learning. It was not enough just

to look at Ergonet. Ergonet was not only important exemplifying masters in OT. The analysis of films and discussions together with the teachers, making new films with in-depth analysis, and continued reflection and discussion, facilitated critical reflection. The clinical films were shared and watched by all Gaza students. The students learned to evaluate their actions becoming what Dreyfus (2001) describe as the competent performer. He / she masters the rules, notices many different elements central in action and can reflect and evaluate his/her performance, but have problems finding better solutions. The teacher must help students to make a plan, make priorities and modify and use the rules. In this process the students were highly supported by the teachers presence on videoconferences. According to Garrison & Anderson (2003) teaching presence is important to design, facilitate and direct cognitive and social processes for the purpose of realising personal, meaningful and educationally worthwhile learning outcomes. The BU teachers have balanced between the intended outcome and the needs and capabilities of the learners. They have facilitated and modelled critical discourses and reflection by constructively critiquing the students' contributions. Stimulated by sharing the films together in the group, analysing and discussing it with the teachers, the students' analysis became more in depth, broader and more holistic and practical knowledge was facilitated. The combination of using films, analysis and practical knowledge, demonstrating skills, problemsolving and critical reflection gave examples of how to use deep approaches in learning.

There is no doubt that the challenges the teachers experienced in educating the Gaza students has been enormous. Was it worth all the effort? The P teacher put it this way*:* "It was a very big challenge. I would think it really took a lot of energy from me, but it gave me a lot of benefits. I learned a lot from it. It is one of the very enriching experiences in my professional life". Her education and the experience from being an OT and teacher were of course important. Being a creative person, being able to think strategically and finding practical solutions was maybe the main reason for the positive result: "There was no other way of doing that except this. I had to create other skills, totally different that you usually see around". Videotaping was a new skill she never had thought it was possible to use because of ethical implications like confidentiality. The way she supervised the students at e-class differed in form from the approaches she has used and the questions she has asked in ordinary class. The process of grading and evaluating the student's practical knowledge demanded more planning and creativity: "I am thinking all the time about how to do that and formulating new strategies. Too much work, but I think it was very interesting and an experience that I

learned a lot from". The NZ teacher said: "I think if I was going to do that again, I would have to do everything differently, everything". The students will have to deliver their assessment and exams on time. She will start using film already in first year in evaluating students' practical skills and to enhance self-reflection.

We chose a contentmanagement program as the basis for Ergonet, for professional reasons. Through the process we also developed the software program to suit our pedagogical needs. Ergonet has high pedagogical potential as has been described. The content has been developed related to neurological conditions and paediatric ot. For the future there are areas that should be covered such as adult rehabilitation, mental health and even more paediatrics. Ergonet will be further developed to support education and be used around the world. The next plan is to adjust it for OT education in Arkangelsk, where the OT programme at the University of Tromso will support the education of OT teachers in Russia. Comparing therapeutic interaction between therapists and clients in different cultures like Palestine and Norway, shows how films can be used comparatively to enhance more consciousness about how culture shapes behaviour (Dreyfus, 2001). The action research is finished, the Gaza students graduated, but OTs in New Zealand, Palestine and Norway are still cooperating and developing Ergonet further.

REFERENCES

Alve, G. (2006). *Terapeutrollen i samhandling: en studie av ergoterapeuters samhandlingsmåter i møte med pasienter.* Faculty of Medicine, University of Oslo, [Oslo].

Alvesson, M., & Sköldberg, K. (2000). *Reflexive methodology: new vistas for qualitative research.* London: Sage.

Alvesson, M., & Sköldberg, K. (2008). *Tolkning och reflektion: vetenskapsfilosofi och kvalitativ metod.* [Lund]: Studentlitteratur.

Aristoteles, & Stigen, A. (1973). *Ethica Nicomachea.* Oslo: Gyldendal.

Ballard, B. a. C., J. (1997). *Teaching International students* o. Document Number)

Barris, R., Kielhofner, G., & Watts, J. H. (1988). *Bodies of knowledge in psychosocial practice.* Thorofare, N.J.: SLACK Inc.

Bates, T. (2005). *Technology, e-learning, and distance education* (2nd ed.). London: RoutledgeFalmer.

Berger, P. L., & Luckmann, T. (1967). *The social construction of reality: a treatise in the sociology of knowledge.* London: Penguin.

Bie, K. (2007). *Refleksjonshåndboken: for bedre læring.* Oslo: Universitetsforl.

Biggs, J. B. (2003). *Teaching for quality learning at university : what the student does* (2nd ed.). Phildelphia, Pa.: Society for Research into Higher Education : Open University Press.

Bjørndal, C. R. P. (2007). The action researcher and Sherlock Holmes: similarities in logical strategies. In (pp. S. 111-132). Kristiansand: Høyskoleforl.

Blair, G. V. D., & Randall, E. V. (2002). Educational reform in post-accord Palestine: A synthesis of Palestinian perspectives. *Educational Studies, 28*(1), 17.

Blanchette, J. (2001). "Questions in the online environment". *Journal of Distance Education, 16*(2), 21.

Bourdieu, P. (1992). *Practice, class and culture*: Polity Press.

Bourdieu, P., & Nice, R. (1990). *The logic of practice.* Oxford: Polity Press.

Bourdieu, P., & Wacquant, L. J. D. (1992). *An invitation to reflexive sociology.* Cambridge: Polity Press.

Bray, N. J., Harris, M. S., Major, C. (2007). New verse and the same old chorous?: Looking holistically at distance education research. *Research in Higher Education, 48*(No. 7), 889-905.

Brekke, M., & Tiller, T. (2007). *Samklang: nye læringsutfordringer i helsefaglig utdanning og yrke.* Kristiansand: Høyskoleforl.

Brown, B. W., & Liedholm, C. E. (2002). Can Web courses replace the classroom in principles of microeconomics? . *American Economic Review, 92*(2), 13.

Brøbecher, H., & Mulbjerg, U. (2005). *Klinisk vejledning og pædagogisk kompetence: i professionsuddannelser.* København: Munksgaard.

Carr, W., & Kemmis, S. (1986). *Becoming critical: education, knowledge, and action research.* London: Falmer Press.

Clark, R. E. (1983). Reconsidering research on learning from media. *53*, 445-459.

Clark, R. E. (2001). *Learning from media: arguments, analysis, and evidence.* Greenwich, CT: Information Age Publishing.

Creek, J. (2007). *The thinking therapist: in Contemporary issues in occupational therapy: reasoning and reflection by Creek, Jennifer*

Lawson-Porter, Anne. Chichester: Wiley.

Creek, J., & Lawson-Porter, A. (Eds.). (2007). *Contemporary issues in occupational therapy: reasoning and reflection*. Chichester: Wiley.

Cullum, L. K. (2003). *Narratives at work, Women, Men, Unionization, and the Fashioning of Identities*. St.John's Newfoundland: ISER Books - Faculty of Arts Publications.

Dale, E. L. (2000). *Etik og moral i uddannelsessystemet*. Århus.

Dewey, J. (1975). *Philosophy of education: (problems of men)*. Totowa N.J.: Little Field, Adams & Co.

Dreyfus, H. L. (2001). *On the internet*. London: Routledge.

Dreyfus, H. L. (2002). *Livet på nettet*. København: Hans Reitzels Forlag.

Dreyfus, H. L., Athanasiou, T., & Dreyfus, S. E. (1986). *Mind over machine : the power of human intuition and expertise in the era of the computer*. New York: Free Press.

Elliott, J. (1991). *Action research for educational change*. Milton Keynes: Open University Press.

Foucault, M. (1972). *The archaeology of knowledge and The discourse on language*. New York: Pantheon Books.

Frøyen, W. (2005). *Fra teori til praksis: lærerens tenkning, i og om undervisning : en modell av læring, et redskap i undervisningsrefleksjon?* [Oslo]: Kolofon.

Fuglestad, O. L. (1997). *"Har kunnskap sin eigen rett? Etiske utfordringar ved å distansere seg frå det nære"*. Oslo: Universitetsforl.

Furu, E. M. (2007). *Rak lærerrygg: aksjonslæring i skolen.* Universitetet i Tromsø, Det samfunnsvitenskapelige fakultet, Institutt for pedagogikk og lærerutdanning, [Tromsø].

Gadamer, H.-G. (1996). *The enigma of health: the art of healing in a scientific age*. Stanford, Calif.: Stanford University Press.

Garrison, D. R., & Anderson, T. (2003). *E-learning in the 21st century : a framework for research and practice*. London: RoutledgeFalmer.

Gisha, C. f. t. L. P. o. F. o. M.

Greene, J. C., & Caracelli, V. J. (1997). *Advances in mixed-method evaluation: the challenges and benefits of integrating diverse paradigms*. San Francisco: Jossey-Bass.

Greenwood, D. J., & Levin, M. (2007). *Introduction to action research: social research for social change*. Thousand Oaks, Calif.: Sage Publications.

Habermas, J. (1978). *Knowledge and human interests*. London: Heinemann.

Hammersley, M., & Atkinson, P. (1996). *Feltmetodikk*. Oslo: Ad Notam Gyldendal.

Hammersley, M., & Atkinson, P. (2007). *Ethnography: principles in practice*. London: Routledge.

Harris, R. (1997). Overseas students in United Kingdom university system. *Higher Education, 29*, 16.

Hart, E., & Bond, M. (1995). *Action research for health and social care: a guide to practice*. Buckingham: Open University Press.

Hermansen, M. (2006). *Læringens univers*. Oslo: Gyldendal akademisk.

Jarvis, P. (1995). *Adult and continuing education: theory and practice*. London: Routledge.

Jarvis, P. (2004). *Adult education and lifelong learning: theory and practice*. London: RoutledgeFalmer.

Jentoft, R. J. (2003). *"Jeg bruker ikke noe skjema, jeg bruker meg selv": et kvalitativt studium basert på ergoterapeuters praksiserfaring med oppfølging i arbeidslivet.* R.J. Jentoft, Tromsø.

Kalleberg, R. (1996). Forskningsopplegget og samfunnsforskningens dobbeltdialog. In (pp. S. 26-72). Oslo: Universitetsforl.

Kalmann, M. (2007). For the students in Gaza the choices are few -Israeli security measures have isolated Palestinians there from outside higher-education opportunities. *The cronicle of higher education.*

Kanuka, H. (2001). University students perspective of the use of Web in distance delivered programs. *Canadian Journal of Higher Education, 31*(3), 49-71.

Kanuka, H., & Anderson, T. (1998). Online social interchange, disord, and knowledge construction. *Journal of Distance Education, 75*(1), 18.

Kielhofner, G. (2004). *Conceptual foundations of occupational therapy*. Philadelphia: Davis.

Kielhofner, G. (2006). *Research in occupational therapy: methods of inquiry for enhancing practice*. Philadelphia: F.A. Davis.

Kinebanian, A. S., M. (1992). Cross-cultural occupatioal therapy: a critical reflection. *Americal Journal of Occupational Therapy, 46*(8), 7.

Klafki, W. (2001). *Dannelsesteori og didaktik - nye studier*. Århus.

Koch, T., & Kralik, D. (2006). *Participatory action research in health care*. Oxford: Blackwell.

Krefting, L. H., Krefting, D.V. . (1991). Cultural influences on performance. In C. B. C Cristiansen, eds. (Ed.), *Occupational therapy: overcoming human performance deficits* (pp. 101-122): Thorofare, NJ: Slack.

Kvale, S., & Nielsen, K. (1999). *Mesterlære: læring som sosial praksis*. Oslo: Ad Notam Gyldendal.

Lave, J., & Wenger, E. (1991). *Situated learning : legitimate peripheral participation*. Cambridge: Cambridge University Press.

Lewin, K. (1951). *Field theory in social science: selected theoretical papers*. Westport, Conn.: Greenwood Press.

Lindquist, I. (2006). *Learning to be a physiotherapist.* Karolinska institutet, Stockholm.

Marton, F., & Booth, S. (1997). *Learning and awareness*. Mahwah, N.J.: Lawrence Erlbaum.

Mary K Tallent-Runnels, J. A. T., William Y Lan, Sandi Cooper, et al. (2006). Teaching Courses Online: A Review of the Research. *Review of Educational Research. , 76*(1), 33.

Mattingly, C., & Fleming, M. H. (1994). *Clinical reasoning: forms of inquiry in a therapeutic practice*. Philadelphia: F.A. Davis.

McCall, M. (1994). Holistic OT: Historical meaning & contemporary implications *Canadian Journal of Occupational Therapy, 61*(2), 8.

McNiff, J., Lomax, P., & Whitehead, J. (2003). *You and your action research project*. London: RoutledgeFalmer.

Merleau-Ponty, M. (1994). *Kroppens fænomenologi*. Frederiksberg: Det lille Forlag.

Merleau-Ponty, M. (2002). *Phenomenology of perception*. London: Routledge.

Merriam, S. B., & Caffarella, R. S. (1999). *Learning in adulthood: a comprehensive guide*. San Francisco: Jossey-Bass.

Mezirow, J. (1991). *Transformative dimensions of adult learning*. San Fransisco: Jossey-Bass.

Mezirow, J. (2000a). *Hvordan kritisk refleksion fører til transformativ læring*.

Mezirow, J. (2000b). *Learning as transformation : critical perspectives on a theory in progress*. San Fransisco: Jossey-Bass.

Molander, B. (1996). *Kunskap i handling* (2. omarb. uppl. ed.). Göteborg: Daidalos.

Nerheim, H. (1995). *Vitenskap og kommunikasjon: paradigmer, modeller og kommunikative strategier i helsefagenes vitenskapsteori*. Oslo: Universitetsforlaget.

Nortvedt, P., & Grimen, H. (2004). *Sensibilitet og refleksjon: filosofi og vitenskapsteori for helsefag*. Oslo: Gyldendal akademisk.

Pacetti, E. (2008). Improving the quality of education in Palestine through e-learning and ECT: the bottom-up approach for a sustainable pedagogy. 6.

Paulgaard, G. (1997). Feltarbeid i egen kultur: innenfra, utefra eller begge deler? In (pp. s. 70-93). Oslo: Universitetsforl.

Polanyi, M. (1983). *The tacit dimension*. Glouchester, Mass.: Peter Smith.

Ramirez Martinel, A., Sime, Julie-Ann. (Writer) (2008). Diverse2008/day02_An analysis of target audiences and their repsonses to different kinds of educational videos, *Broadcasted, Diverse 2008*.

Ramirez Martinell, A. (2009). *Educational Video: Exploring the complex relationship between production, educational use and audience.*, Lancaster University, United Kingdom.

Ramsden, P. (1988). *Improving learning: new perspectives*. London: Kogan Page.

Saugestad, S. (1997). Fortolkningens forløp: om feltarbeid og fortolkning av differensiering i samfunn. In (pp. s. 188-206). Oslo: Universitetsforl.

Scardamalia, M. a. C. B., eds. (2008). Knowledge Building. 2008, .

Schön, D. A. (1987). *Educating the reflective practitioner*. San Francisco: Jossey-Bass.

Tiller, T. (1999). *Aksjonslæring: forskende partnerskap i skolen*. Kristiansand: Høyskoleforl.

Tomas, M. J. W. (2002). Learning without incoheret structures. The space of online discussion forums. *Journal of Computer Assisted Learning, 18*, 351-366.

Vygotskij, L. S., & Cole, M. (1978). *Mind in society: the development of higher psychological processes*. Cambridge, Mass.: Harvard University Press.

Wahbeh, M. K. N. (2000). Teacher education in Palestine: Understanding teaching realities and development through action research. *Paper, Al-Qattan Centre for Education, research and development, Ramallah, Palestine*.

Wells, G. (1999). *Dialogic inquiry* (Vol. 37). Cambridge.

Whitehead, J., & McNiff, J. (2006). *Action research: living theory*. London: SAGE.

Wittgenstein, L. (1967). *Philosophical investigations*. Oxford: Blackwell.

Aagaard Nielsen, K., & Svensson, L. (2006). *Action and interactive research: beyond practice and theory*. Maastricht: Shaker Publishing.

Aars, M. (2006). Improving professional practice by using internet: Experiences in using the tailor made tool "Physio-net" in physiotherapy. Tromso, Norway: Tromso University College, Department of health studies

TROMSØ UNIVERSITY COLLEGE   **BETHLEHEM UNIVERSITY**

INFORMED COOPERATION

Occupational Therapy studies in Gaza, developing and using ICT and flexible forms of learning

The purpose of this project is to develop and use internet and communication technology, ICT and flexible forms of learning in the education of OT students in Gaza in the period of 2005 – 2007. This project will use and get experience from the process of developing and analyzing e-learning materials such as videos and pictures. The professional and pedagogical intentions are to close the gap between theory and practice seeking to enhance the ability of the students for reflection, analysis and problem solving in Occupational Therapy.

Action research is used as a method. This inplies that Occupational Therapists, as clinicians, teachers, students and projectleaders are working together to reach the goals. All participates have the right to refuse use of material, or parts of material.

This declaration gives permission to the participants in this project to use the knowledge that we have developed together for the purpose of education, research and publication.

Tromso in Norway / Bethlehem in Palestine

Date:

_____

Name   Title   Workplace

INFORMERT SAMTYKKE TIL VIDEOOPPTAK TIL BRUK I UNDERVISNING VED ERGOTERAPEUT UTDANNING

RETNINGSLINJER FOR BRUK AV VIDEOOPPTAK

Videoopptak / bilder skal inngå ved undervisning av ergoterapeuter/studenter ved grunn- og etterutdanning innen ergoterapi. Utdanningsinstitusjonen vil være ansvarlig for oppbevaring og disponering av videofilmene. Følgende retningslinjer ligger til grunn for opptaket.

1. Videoopptak kan bare foretas etter samtykkeerklæring fra barn og deres pårørende.
2. Videopptaket tilhører ergoterapeututdanningen og kan kun brukes av ergoterapeuter i undervisning. Studieleder har ansvar for at opptaket oppbevares trygt.
3. Dersom klient / familie eller andre som deltar på opptaket ber om det, skal opptaket slettes.
4. Da Universitetssykehuset i Nord-Norge og Høgskolen i Tromsø bistår med utdannelse av ergoterapeuter i utlandet, ber vi om tillatelse for at opptaket også kan oppbevares og brukes til undervisning ved ergoterapeutstudier der.

Undertegnede gir sitt samtykke til at det foretas video-opptak, og er inneforstått med bruken av opptakene.

Dato:…………………….. Sted:…………………………..

……………………………………………………………………
Klient   /   Foresatte

……………………………………………………………………
Ergoterapeut   /   Student

	Sett kryss her om du ikke gir tillatelse til at videofilmen kan brukes i utlandet.

INFORMASJON OM VIDEOOPPTAK TIL UNDERVISNING AV ERGOTERAPEUTSTUDENTER I PALESTINA

Gjennom Norad og Norsk Ergoterapeututdanning har Norge siden 1996 finansiert og støttet opp om etablering og utdanning av ergoterapeuter ved Betlehem Universitet i Palestina. I 2003 ble det også tatt opp 10 ergoterapeutstudenter i Gaza, fordi dette området har stort behov for helsepersonale med rehabiliteringskompetanse. Mange barn mangler tilbud om ergoterapitjenester. På grunn av den ustabile politiske situasjonen med reiserestriksjoner, er det vanskelig for lærere i Betlehem og studenter i Gaza å møtes for veiledning og undervisning. Ved bruk av videofilm av barn i ulike aktivitetssituasjoner, som har behov for oppfølging av ergoterapeut, kan vi bidra med læring og kunnskap om barneergoterapi for studentene. Videofilm kan være et utgangspunkt for å hjelpe studentene til å reflektere over hvilken kunnskap studentene trenger for å kunne bistå barnets rehabiliteringsbehov og tilrettelegging for deltakelse i lek og meningsfull aktivitet.

Dersom dere ønsker mer informasjon om dette prosjektet, ta gjerne kontakt.

Med vennlig hilsen

Rita Jentoft

Høgskolen i Tromsø, tlf.:776 60696 / mobil 90194675, e-mail: rita.jentoft@hitos.no

Prosjektleder for Norad / Norsk Ergoterapeutforbund ved Betlehem Universitet

INNHENTING AV SAMTYKKE

1. Videoopptak av klienter skal bygge på frivillighet. De som deltar må gi sitt skriftlige samtykke på en samtykkeerklæring (se ovenfor).
2. For mindreårige deltakere må det også foreligge skiftlig samtykke fra pårørende.
3. De som deltar i videoopptaket skal forklares hva opptakene skal brukes til.
4. Dersom deltaker ønsker det har de anledning til å se opptakene før videre bruk.

INFORMED CONSENT TO THE USE OF VIDEO RECORDING IN THE EDUCATION OF OCCUPATIONAL THERAPISTS

GUIDELINES FOR THE USE OF VIDEO RECORDING
The videofilm will be used in the education of occupational therapist students. The University are responsible for storing and the use of the videofilms. The following guidelines are to be followed:

1. The record of videofilm can only be done if the child or their relatives has given their informed concent.
2. The record of the video belongs to the occupational therapy program and is only allowed to be used by occupational therapists for the purpose of education. The leader of the program is responibe for safe storing of the films.
3. The record will be deleted if any of the participants in the film asks it to be.
4. Because Tromso University College and UNN cooperate with and support the education of occupational therapist in foreign countries, we ask for permission for using and storing the video for use in the education of occupational therapist in these places.

The undersigned gives his/her consent to video recording, and has agreed to the usage of the recordings.

Date:……………………. Place:……………………………

………………………………………………………………….
Client   /   Relative

……………………………………………………
Occupational therapist /Student / Teacher

| Make a sign here if you don't give permission to use the film abroad. |

GUIDELINES FOR USING VIDEO RECORDING
Norway has supported the establishment and the education of occupational therapists at
Bethlehem University in Palestine. In this area it is in great need of health personnel
competent in treatment and rehabilitation and a need occuaptional therapist. Bethlehem
University has since 1996 educated more than 50 occupational therapists.

The videofilm will be used as a starting point when guiding occupational therapist students in
Norway and Palestine to reflect on what kind of knowlegde is needed to assist the child's
need for training, rehabilitation, and to arrange for participation in play and other meaningful
activities.

If you need futher information on this project, please contact me.

Yours sincererely

Rita Jentoft
Tromso University College, tlf.:+47 776 60696, e-mail: rita.jentoft@hitos.no
Prosjektleder for Norad / Norsk Ergoterapeutforbund at Betlehem Universitet

OBTAINING CONSENT
1. Video recording of clients shall be voluntary. All participants must sign a
   declaration of consent.
2. For under-aged participants, a declaration of consent must be signed by relations.
3. Participant must be informed what the recordings will be used for.
4. If the participant wishes to see the recording before further use, they must be given
   the opportunity to do so.

(**Informed consent** is a legal condition whereby a person can be said to have given consent
based upon an appreciation and understanding of the facts and implications of an action. The
individual needs to be in possession of all of his faculties, such as not being mentally retarded
or mentally ill and without an impairment of judgment at the time of consenting. Impairments
include illness, intoxication, drunkenness, using drugs, insufficient sleep, and other health
problems)

Occupational Performance

occupation
- activity analysis
- areas
  - activities of daily living/self maintenance
  - work/productivity
  - play/leisure
  - rest
- components
- occupation, activity, task
- flow
- deprivation
- alienation
- inbalance
- justice
- apartheid
- marginalisation

client
- volition
  - values
  - interests
  - personal causation
  - meaning
- habituation
  - roles
    - worker
    - friend
    - organisation member
    - family member
    - religious participant
    - student
    - hobbyist
  - habits
- performance capacity
  - physical
  - cognitive
  - psychosocial
  - subjective experience
- experience of the self
  - the self
  - body experience
  - spirituality
- development of occupations during the lifespan stages
  - childhood
  - adolescence
  - adulthood
  - later adulthood
- gender
- personal circumstances

environment
- physical
  - natural
    - sensory
      - weather
      - sound
      - light
      - odours
      - aesthetic
    - landscape
    - water
    - Subtopic
  - constructed
    - buildings
      - home
        - public
      - commercial
        - restaurants
        - shops
        - bank
        - markets
        - utilities
        - ergonomics
      - workplaces
      - neighbourhood
      - health facility
        - occupational therapy dept
    - roads
    - checkpoints
    - border crossings
    - transportation
  - Subtopic
- sociocultural
  - family
  - friends
  - neighbours
  - colleagues
  - community
  - culture
  - religion
  - support groups
- laws and policies
  - history
  - laws
  - financial
  - departmental structure
  - health plans
  - occupation
  - Subtopic
- Subtopic

Occupational therapist
Knowledge base
- occupation
  - practice model in OT
    - MOHO — case study
    - COPM — case study
    - OPM-australlia — case study
    - Kawa River Model — case study
  - occupational science
  - Frames of Reference in OccT
    - biomechanical
    - neurodevelopmental
    - Sensory Integration
    - Behaviour
    - Cognitive
    - Psychodynamic
- Related knowledge in Occ Therapy
  - psychology
    - cognitive
    - behavioral
    - psychodynamic
    - developmental
    - neuropsychology
    - social psychology
    - learning theory
  - Biological science
    - Development
    - anatomy and physiology
    - Medical conditions
    - mental illness
    - Anatomy and physiology
  - biomechanics
  - ergonomics
  - kinesiology
  - disability studies
  - rehabilitation
  - Social Science
    - sociology
    - anthropology
  - philosophy
  - research
  - other theories
    - recovery
    - motivation
    - flow
    - Subtopic
- Subtopic
  - history and philosophy
  - core values

Attitudes

skills
- Assessment
  - observation
    - AMPS
    - PRPP
    - COTE
    - Informal
    - ACIS
  - interviewing
    - OPHI-2
    - COPM
  - standardised tests
    - LOTCA
    - toglia
    - Rivermead
    - Mini mental
    - perdue pegboard
    - minnesotsa dexteerity test
    - ssensation
    - ROM
    - muscle strenght
  - work visit
  - home visit
  - environmental assessment
- Treatment Techniques and strategies
  - body and function
    - relaxation
    - self awareness
    - joint protection
    - orthotics
    - bobath
    - hearing voices group
    - avolta
  - activity and participation
    - play
    - ADL
    - groupwork
    - work — work simplification
    - adaptations
    - physical activities
    - creative activities
    - assertiveness
    - home management
    - wheelchair prescription
    - transfers
    - social skills training
    - flow
    - education
    - cognitive approaches
- clinical reasoning

Occupational Performance - conseptmap (2) (2).mmap - 18.12.08 -

- ☑ values 📝
- ☑ Experience of mastery 📝
- ☑ interests 📝 ——— ☑ motivation 📝
- ☐ personal causation 📝
- ☐ meaning 📝

- worker 📝
- friend 📝
- organisation member
- family member ——— ☑ activity roles 📝
- religious participant
- student
- hobbyist
  - ☐ habit and activity roles 📝
- ☑ habits 📝
- ☐ IADL ☑ ADL 📝
- Leisure
- Work ——— | Client 📝

client

- physical 📝
- cognitive 📝
- psychosocial 📝 ——— ☑ experience of capacity 📝
- subjective experience 📝

- ☑ Everyday life 📝

- the self 📝
- body experience 📝 ——— experience of the self 📝
- spirituality 📝

- childhood 📝
- adolescence 📝 ——— development of occupations during the lifespan stages 📝
- adulthood 📝
- later adulthood 📝

- gender 📝
- personal circumstances 📝

Client.mmap - 12.09.06 -

Developing Ergonet for paediatrics

developing a picture library
- collect pictures from personal collection, internet, publications

Making movies
- Occ Therapy assessment
- play
- cerebral palsy
- TBI
- learning disabilities
- ③ 🏳 autism
- adaptation of the environment
- emotional disturbance
- positioning
- normal development
- Subtopic

analysing movies and pictures
- description by the clinical OCC THER
  - child
  - referral
  - illness
  - development
  - function
  - goals and purpose
  - clinical reasoning
- analysis by the teachers of the essential knowledge
  - child, activity, context/environment
- what concepts in the knowledge tree have to be developed
- how to present this to the students
- what lectures are needed

developing the program
- design
- organisation
- budget
- developing participants expertise
- ownership
- coordination
- formal agreement
- informed consent
- more translation to english
- inserting pictures - check

developing concepts
- child
  - subjective experience
  - Subtopic
- youth
- occupation
  - ADL
  - play
  - school
  - activity analysis
- environment
  - objects
  - safety
  - Subtopic
  - physical
  - sociocultural
    - role of the family
    - attitudes
- occupational therapy knowledge
  - medical
  - pathology
  - development
  - functional ability

writing lectures
- overview/introduction to occ therapy in paediatrics
- normal development
- pathologies
- assessment
- intervention
- adaptations
- working with caregivers/parents
- environment - home, kindergarten, school
- play
- communication

developing student activities