To challenge students beliefs to support transition into higher education

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Abstract

The main objective of this project was to support the transition of first year students into higher education by helping them become aware of the beliefs and values they bring, and the demands they will encounter in a problem-based health profession education. Consideration was given to student approaches to learning and ideas about their future professional roles, including gender and power issues. By making students´ thoughts more visible through reflective writing and the use of portfolios, these issues can be addressed for reflection and challenge, helping students monitor change and increase awareness.

The project has been carried out for all students in the common introductory course Health, Ethics and Learning (HEL1) and for students at three of the programmes; nursing, physiotherapy and medical biology. A structure for using reflective writing and portfolio has been implemented into curriculum. Findings show that reflective writing helps students to reflect critically about their learning. Students' documentation in a portfolio also helps students to see developments and change and gives valuable information to teachers about students thinking in the transition process.

Keywords: First year experience, portfolio, reflection, PBL, health care education

An educational development project funded by the Council of Renewal of Higher Education in Sweden was implemented during 2005 – 2006. The aim was to support first year students' transition into higher education. Reflective writing was a way to help them in becoming aware of the beliefs and values they bring and the demands they will encounter in student-centred education using problem-based learning (PBL). Students' approaches to learning and ideas about their future professional roles including gender and power issues were addressed.

Rationale for change

In a rapidly changing society, conditions for higher education are constantly changing. An increase in numbers and greater diversity of students puts new demands on educational development. It is well known that transition from upper-secondary school to higher education is sometimes difficult, and entering into the complex world of a PBL curriculum can be even more complicated. Universities today introduce the new students by arranging social activities mostly with help from older students. However, opinions among students show that the education does not ask for their experiences and previous knowledge and how it can be used. We need to develop a common understanding of this transition process, so that we can communicate with and support students.

Problem based learning and integration between professions are core elements at the Faculty of Health Sciences (FHS) that create a good learning environment. A variety of learning opportunities are provided, and critical reflection and feedback, are made possible through programme integration and work in small groups. Many teachers are aware of the importance of reflection and feedback. However over the years it has been difficult to maintain and to further develop methods that make these activities a natural part of daily teaching and learning processes.

There is a need for development of a systematic approach concerning reflection that helps students and teachers monitor learning and professional development on a continuous and coherent basis. This includes introducing and supporting the use of tools for reflection and finding ways to use student documentation for dialogue and feedback. Through reflective writing and documentation in a portfolio, students´ thoughts and feelings can be made visible and be addressed for reflection. It can help students to see development and facilitate communication of experiences and expectations with peer students and teachers. We believe that this is one way to reach a better understanding of new students' situations.

In our view, the educational model at FHS has great potential for dealing with new demands. A basic idea of the "portfolio project" is to build on and use existing structures, and to re-vitalize essential aspects of PBL such as pre-understanding, self-directed learning and feedback.

Review of relevant literature

Transition into higher education

Studies about students first year in have become an increasingly important part of higher education research (James, 2001). The work and research of McInnis & James (1995) together with conferences on the *First Year Experience* have stimulated educational development aimed at supporting students' transition into higher education (Krause, 2003). McInnis (2001) states that there is a need to reflect critically on the congruence between what we in the academy believe is important for students and what they themselves hold as important.

The encounter between students and the academy has mostly been looked at from an academic perspective with the view of assimilating the students to the academic environment (Lawrence, 2000; McInnis, 2001; Howell, 2003). According to McInnis (2001), instead we have to look at how students´ diversity can make an added value to their first year experiences and how it can

change the character of transitional issues. Howell (2003) emphasizes the importance of paying attention to the identity and the experiences that students bring and to relate to the different contexts that students come from.

Pancer et al. (2000) have found that students with more complex expectations on the new educational context were more prepared to handle stressful situations. The influences of students' earlier educational experiences and their motives and study goals have been noticed in several studies (Ramsden, 1992; Gibbs et al., 1986; Bogler & Somech, 2002). It has also been shown that creating a good climate and giving possibilities to interact with peer students, teachers and the whole university is of great importance (Light, 2001). There are many examples of learning activities described aiming to promote social processes between new and senior students (Peat et al., 2001; Edvardsson-Stiwne, 2004).

A challenge for teachers in a student-centred approach is to take a student perspective and to build teaching on students' conceptions and prior knowledge (Marton & Booth, 2000). This is an essential part of problem-based learning where the learning process starts in what students think (Silén, 2004). Another essential part is to give prerequisites in developing self-directed learning over time (Silén, 2003). Challenging students' beliefs early in their studies is described as important for development of a professional identity (Forbes, 2000; Cook, Gilmer & Bess, 2003).

The importance of critical perspectives on gender in higher education has also been recognized in reports. Students need to be acknowledged as individuals but gender specific experiences also have to be recognised (Bondestam, 2003). An early and continuous reflection on gender issues is important in education for health professions. An inter-professional learning setting offers good opportunities for students and teachers to critically reflect on gender, power and hierarchies related to their within healthcare systems.

Reflective learning

The importance of *reflection* in learning is well documented (Boud et.al, 1985; Schön, 1983; Molander, 1993; Moon, 2000) and it is argued that reflection is a prerequisite for developing professional competence. Reflective learning has become a core element in education of professionals. It encourages students to integrate theory and practice and to turn every new experience into a potential learning experience. If students are to develop as reflective practitioners, they have to be encouraged and supported in reflective and meta-cognitive skills throughout their education. The use of reflective writing in which students formulate thoughts into words can help creating an inner dialogue and stimulate further thinking (Lindström, 1997).

It is important to provide a context and a space to learn so that reflective activity takes place on a daily, continuous basis (Schön, 1983; Boud et.al, 1985; Boud & Walker, 1998). The use of portfolios is widely recognized within health professions as a powerful tool for reflection and monitoring of personal and professional development (Snadden & Thomas, 1998; Friedman et.al., 2001). Baume (2001) defines a portfolio as:

> "a structured collection comprising labelled evidence and critical reflection on that evidence. A portfolio is produced as a part of a process of learning. It is presented to show evidence of that learning. It may additionally comprise an explicit claim or demonstration that specified learning outcomes have been achieved" (Baume, 2001)

It has been shown that the using a portfolio helps students to reflect on their own development and to support their memory. They get a better understanding of what they have learned and what they still need to learn (Hartman, 1995). The use of portfolio is described to support the learning process by making development visible and empower students' independence, responsibility and awareness (Kimeldorf, 1994; Taube, 1997; Friedman et.al., 2001; Ellmin, 2003). Stockhausen (2004) found in a study of nursing students, that portfolio combined with PBL elevated students self-direction and motivation. Using portfolio can also help teachers to

learn more about students' views and thoughts in their learning processes (Ellmin & Josefsson, 1997).

The problem addressed in this project was how to support students' transition into higher education. Structures and methods to increase awareness of what beliefs and ideas students bring into their studies needed to be developed. By making students beliefs about learning, professional roles and gender issues visible in a portfolio, they can be challenged and form the basis for continuous reflection and monitoring the understanding of their own learning processes. As a result students´ self-confidence in their learning may increase.

Importance of the project and critical questions

The existing educational concept and context at the Faculty of Health Sciences has served as an important framework for the project. The well developed pedagogical idea and existing structures of PBL design, together with the inter-professional setting in a common introductory course, gives good opportunities for innovation.

The importance to support students' personal and professional development is well recognised among students and teachers. Everyone can agree on the value of reflection and getting feedback in the learning process. Still, both students and teachers show doubts using writing as a tool for reflection. Usually it's related to unaccustomedness and that it is seen as time consuming.

One critical factor in the project was getting students and teachers engaged in planning and implementation. We knew that this could be a challenge, as both students and teachers can be very hesitant incorporating new ideas in time slimmed curricula. Our idea was to work through the teachers and to build on the existing activities and structures. Another issue was difficulties with the choice and use of pedagogical concepts. In planning the project we discussed the choice of concepts and we decided to use the English well established concept *portfolio*. When it came to tools for reflective writing, the concept *thinking journal* (Perneman, 2001) felt like a new fresh concept in Swedish, with an equivalent meaning as reflective or learning journal.

A thinking model for the project design

The project idea was formulated into a thinking model (figure 1) describing the use of portfolio for personal and professional development. This model has been guiding the process throughout the project. It has also been used as the basic idea in the design of a poster for presentation of the project (appendix 1)
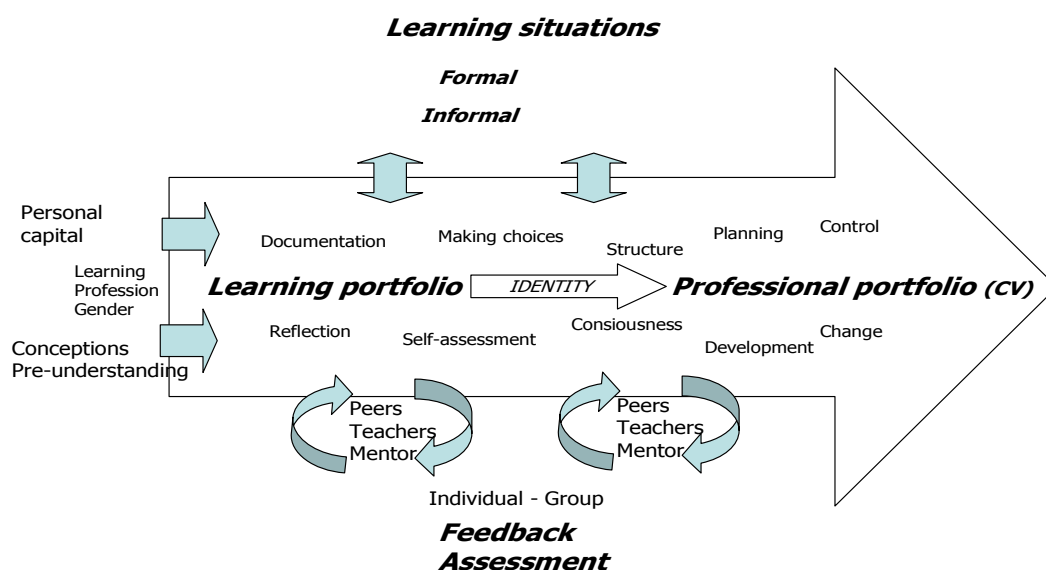

Figure 1. Portfolio for personal and professional development

Method

Students

The project has been carried out for all students in the common introductory course Health, Ethics, and Learning (HEL1) lasting 8 weeks and students at three of the programmes; nursing, physiotherapy and medical biology during the first year. In the autumn semester in 2005, 420 students started at the Faculty of Health Sciences. The implementation continued for 80 students at the Nursing Programme, 29 students at the Physiotherapy Programme and 38 students at the Programme in Medical Biology during the first year, semester 1 and 2. In the spring semester 2006, there were 310 new students involved in the project in the HEL course, 80 students at the Nursing programme and 36 students at the Physiotherapy programme. The Medical Biology programme does not have new students in spring semesters.

Innovation

In the preparation phase a project group was formed of teachers representing the HEL1 course and the three involved programmes, a student from the student union at the Faculty of Health Sciences and educational expertise, project leader and co-leader from the Centre for Educational Development and Research. As we thought that it was very important to involve teachers and students in the project, the project leader and the co-leader visited and discussed the project with teachers and students at the HEL1 course, the respective programmes and the student union. The students thought that the project was a good idea as they have asked for more time for reflection. At the same time some of them were doubtful to get time to write down their reflections continuously. The teachers had to a great extent a positive attitude, but they wanted to know exactly how to do it and they were a little bit worried about how to get time for the implementation. Our idea to reduce these doubts was to use already existing tasks and activities in the curricula.

During the implementation phase, teachers and students were involved in the process with many discussions in different kinds of resource sessions. During the autumn semester 2005, the project was implemented in the course HEL1 for all new students at the faculty. Forty-five teachers were tutors in the base groups. Next semester, spring 2006, web-based summaries of the reflections were introduced. Each representative of the programmes in the project group was responsible for the implementation at their programme during the next phase in the students' first year with support from the project leader and co-leader. An overview of the different interventions and activities implemented in the project is presented in figure 2.
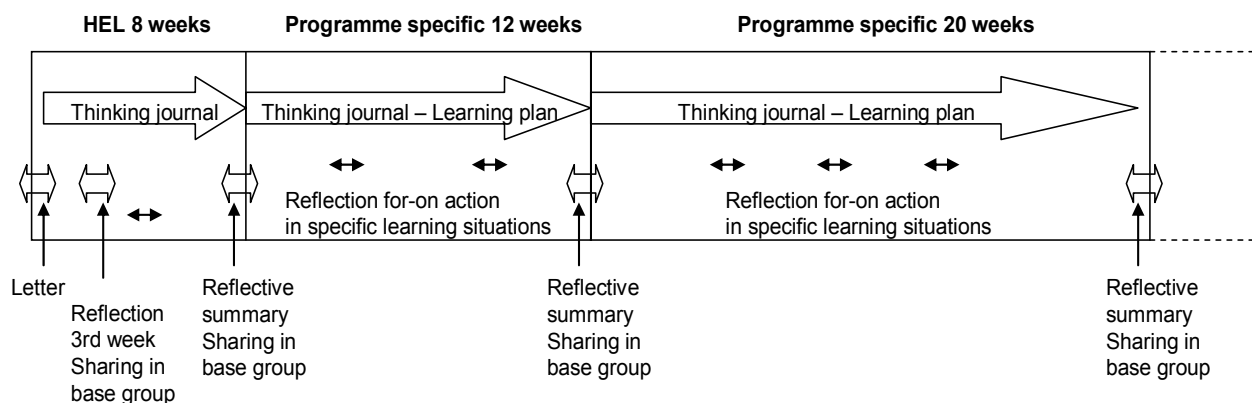

Figure 2. Overview of reflective writing activities during first year.

Interventions in the HEL1 course

In the introduction in spring 2005 it became too much focus on the innovation as a project. Students and some of the teachers interpreted it as a research project and not as primarily an educational development project. We also put too much emphasis on students using a thinking journal reflecting around their experiences and certain aspects of the course on a continuous base using the base group. This showed to be a difficult task, for both students and teachers. The work with writing and reflection became a parallel track not integrated in ordinary coursework.

Experiences from the first semester resulted in a few major changes for the spring semester 2006. We had to get rid of the project focus and to make all reflective writing activities integrated in the work of the base group. We decided to introduce a web based learning platform to support students' documentation and sharing of reflections.

The new structure for students' reflective writing was to focus students´ writing at specific points in time: 1st week, 3rd, week and the last week (see figure 2). The thinking journal became more of a personal journal that tutors tried to integrate into the tutorial work. During the first week, students started with writing a letter to them selves, to be opened at the end of the course. They answered questions like:

- Why have I chosen this education?
- What is my picture of the profession I have chosen?
- What experiences and knowledge do I have/offer that may be useful in my learning?
- What expectations do I have on the educational programme and my own studies?
- What do I think PBL will mean/bring to me?

In the third week of the course, the students were asked to reflect individually around what had been most important and most difficult during the first two weeks and what was most important for them in the continuation of the course. They wrote this as a contribution in their base group's web based discussion forum. This formed the base for a face to face discussion to share their experiences and it was served as documentation in the group. At the end of the eight weeks, the students were asked to reflect about their development during the course. They looked back at the letter they had written in the first week, the document after two weeks, their thinking journal and other sources of documentation. They reflected about their development and experiences related to the three areas learning/PBL, professional role and gender/power. They also reflected about the most important thing they had learnt, that they wanted to carry into the next course. Again they summarized their thoughts as a contribution in a web-based discussion forum, which served as the basis for a final evaluation in the group. The students were encouraged to be aware of their new experiences looking forward into their different programmes.

Interventions in the three programmes

After the first course HEL1, nursing, physiotherapy and medical biology students continued in the project, working with writing and reflection. Like in HEL1 the students were requested to use a thinking journal and they made written reflections at the end of each semester. In addition, each programme worked differently in integrating writing and reflection in their specific contexts. A variety of new and existing tools were used. Individual learning plans and laboratory journals are two examples.

Students at the Nursing programme were encouraged to continue from the HEL1 course to write in their thinking journals. In semester one the thinking journal was used in evaluations in the middle and the end of the semester and served as the basis of the discussion about the student's individual learning plan. At the end of the semester, the students wrote a reflective summary concerning their development related to their professional role, learning and gender/power issues. They also commented literature they had red during the semester. As the students made study visits and field studies in health care, they were encouraged to reflect on the study visit

and their view of the profession. In semester two the students continued to write in their thinking journals. The students shared their reflections with each other in the first tutorial about experiences from semester one and expectations on semester two. Apart from this, the students used their thinking journals as in semester one. Instead of study visits the students had 6 weeks of clinical practice in the community health care for elderly.

At the Physiotherapy programme some elements of the curriculum in semester one and two were chosen for the students' organized written reflections. In semester one, three field studies in health care were chosen for reflection on the physiotherapy profession. One task was to reflect on touch in relation to palpation exercises and massage. Focus was on learning, profession and gender. In semester two, the students had two weeks of clinical practice in community elderly health care. Focus for reflection was also here on learning, profession and gender. In one task about body awareness the students were supposed to write reflections on learning. During the whole year the students were encouraged to write in their thinking journals. The reflections were followed up in the base groups.

During semester one the medical biology students had an exercise in learning styles using Kolb's learning style inventory. Discussions were also carried out about the possible content in a professional portfolio for a medical biology student and how to make notes in a laboratory book. One occasion was scheduled for reflection on the students' learning in relation to the actual course. Documentations from discussions and organized reflections were placed on the programmes intranet. At the end of the semester the students reflected on their own development. When students began semester a short summary of all their reflections were presented and discussed. Learning goals in base group work was another object for reflection. Thinking journal, laboratory book and portfolio were followed up continuously. As in semester one, the students used the evaluation form as a base for development reflection at the end of semester two. The teacher responsible for the project in this programme met the students regularly during the first year to give support.

Procedures

Data has been collected within two areas related to the aims of the project;
1. students' views and experiences of transition during the first year
2. students and teachers experiences and what they have gained from using reflective writing and portfolio

A variation of documentation and different kinds of data has been used to cover the two areas (see table 1)
- Questionnaire; used at the end of semester one and two asking students retrospectively about their study experiences and the use of writing and reflection in their studies
- Course evaluation in HEL1; a Study experience questionnaire (5 grade scale) and some open questions. Questions about students' experiences of writing and reflection were added.
- Reflection in the 3rd week; students' reflections *on* and *for* action, made as contributions in the base groups´ web based discussion forum.
- Reflective summary; students' reflections on their experiences and development, and future learning needs related to learning, professional role and gender/power issues. In HEL1 this was made documented in the same way as the reflections in the 3rd week. In the three programmes this was made in a variety of ways.
- Planning documents and notes from meetings in the project group and with different groups of teachers and students throughout the project.

During the project the web based learning platform Blackboard has been used as a tool for communication within the project group and for systematic collection of data.

Students	Autumn semester 05	Spring semester 06	Autumn semester 06	Spring semester 07
HEL I	Reflection 3rd week Reflective summary Course eval -students Course eval -teachers	Reflection 3rd week* Reflective summary* Course eval -students Course eval.-teachers	Reflection 3rd week* Reflective summary* Course eval -students Course eval.-teachers	Reflection 3rd week* Reflective summary* Course eval -students Course eval.-teachers
Physio-therapy	Questionnaire Reflective summary semester 1	Questionnaire Reflective summary semester 1&2	Questionnaire Reflective summary semester 1&2	
Nursing	Questionnaire Reflective summary semester 1	Questionnaire Reflective summary semester 1&2		
Medical Biology	Questionnaire Reflective summary semester 1	Questionnaire Reflective summary semester 1&2		

* Students documentation from reflection 3rd week and the reflective summary spring 06 to spring 07 is only partly collected and briefly analyzed. This data will be used for future systematic analysis and research.

Table 1. Evaluation procedure

Results

Students' views and experiences of first year transition

Students' reflections in the 3rd week in HEL 1 aimed at making students experience from the first two weeks in the new learning environment visible. Students express that they have felt very welcome and well taken care of with a lot of social activities and good support from senior peers. The first weeks are described as very intensive with feelings of chaos and frustration but also excitement and curiosity. In general they think it has been a good start and introduction and they often relate to the support from peers in the base group. Students have high expectations and many express a confidence in PBL even if it feels difficult to grasp. They express that they have made new discoveries about their learning.

> "For me it's not difficult to understand what PBL is and how it works. The difficult part is to change an old habit to a new habit. In the beginning you expected to get some kind of help from the tutor, but as soon as you understood that the help will not come, you start to think yourself."

> "During these two weeks I have started to feel some kind of motivation that I have never felt before and that has made me realize the big difference between answering someone else's questions and answering my own questions. Suddenly it's so important to understand things."

> "The frustration and confusion have subsided and suddenly I realize that I have learnt more than I thought and as a matter of fact I'm beginning to grasp PBL. I never thought I would do that, as well as I have."

The difficulties that students encounter are mainly related to getting acquainted with the new context and adjusting their way of studying to PBL. The issues they discover as most important to work on are mainly;
- planning and setting own learning objectives,
- prioritizing and not postponing things,
- finding relevant information,
- being prepared for base group sessions and involvement in the group work.

At the end of the introductory course when students reflect on their experiences and development during the course, most of the feelings of chaos and frustration have resolved. From students' reflections on what has been the most important thing they have gained from the course the following categories emerge.

- *Changes in approach to learning*; understanding and using PBL and being more self directed and independent.

- *Development of functioning in a group*; self-confidence in interactions, group as a tool in learning

- *Development of study strategies*; planning, finding information and prioritizing.

- *Changes in thinking*; critical thinking, problem solving and using theory

- *Personal development and growth*; development as humans, self confidence and talking in front of people

- *New perspectives* on ethical and health issues

- *Making new friends* from different programmes

- *Confirmation* of right choice of education

When students at the end of semester one and two are asked to reflect on their studies so far and to look back at the first period of study, they generally give a very positive picture. Most positive experiences are making new friends from different programmes, the support from peers and a feeling of fellowship at the faculty. Many students also regard PBL and the increase of own responsibility as positive. What stands out as most facilitating for students learning is the support from peer students and working in the base group in PBL (figure 3).
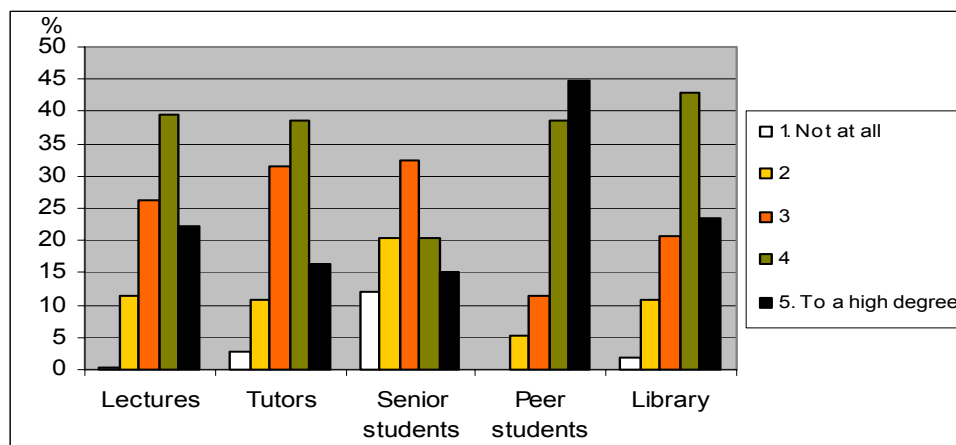

Figure 3. The significance of facilitating factors for student learning.

For many students the journey of transition through first year also has been surrounded by difficulties and obstacles. Understanding the meaning of PBL and how to work in the base group is perceived as most difficult. In their own learning process they also have been struggling with taking own responsibility and issues concerning what to learn, how much and how deep, finding relevant information and making choices and knowing what is expected from them. The greatest obstacles they experience in their studies are the lack of time and self discipline.

Students' experiences of using reflective writing and portfolio

As a part of the course evaluation in the end of HEL1, students were asked to evaluate the reflective writing activities used during the course. In figure 2 students' appraisal of the different activities are displayed. The use of a thinking journal has shown to be the most challenging task for students compared to reflective writing tasks at certain points in time. There is also a small increase in how students perceived the value when comparing the first semester of implementation and two semesters later which can be seen in figure 4.
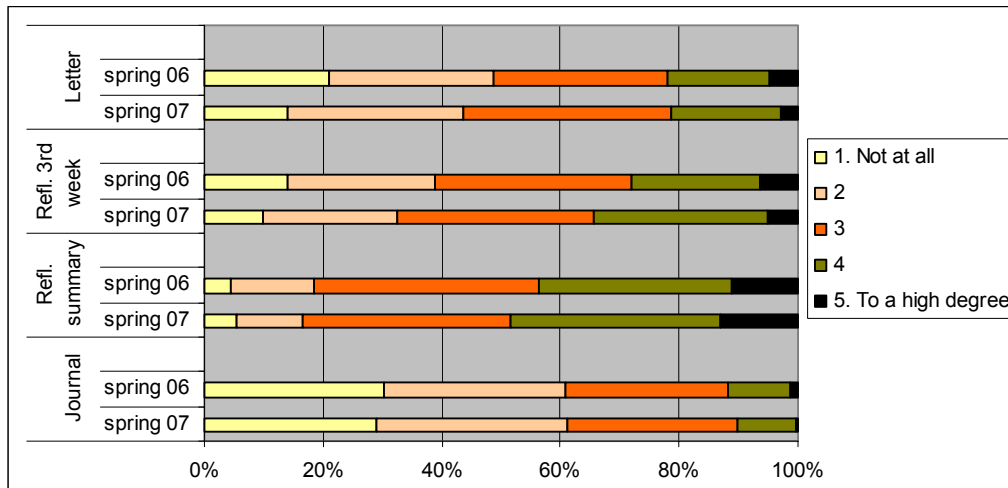
Figure 4. Students' appraisal of the benefit of reflective writing activities in HEL1

Throughout the project students have been asked open questions about their experiences of documenting their thoughts and using a portfolio. Student documentation describe a great variation of what they regard as benefits and what they experience as hindrances. Most students can see potential advantages using reflective writing but many of them have had difficulties in using it. The following categorization of students' answers accompanied with quotes gives a general picture of what they see as the most important benefits.

- *Making thoughts visible*
  "It's a big difference to see it in front of me, thoughts become clearer when I see them objectively."

- *Structuring of thoughts*
  "My thoughts get structured. Things get visible in a way that would not have been possible otherwise. This can result in new insights about who I am.", "Structuring of something that is a bit messy."

- *Resting place for thoughts*
  "Empty my head occasionally ", "Letting my thoughts rest on paper."

- *Making development visible*
  "Looking back to see my own development. Fun to see the incredible development I have gone through"

- *Supporting the learning process*
  "To see things that were difficult now has been resolved. My understanding increase and I feel that I can handle future problems.", "Creates better understanding of what I have learnt and my additional learning needs."

- *Attending to feelings*
  "One really reflects on ones feelings. I often think I do it in my head, but apparently not."
  "Translate my feelings to concrete insights and standpoints."

Students' experiences of hindrances can be related mainly to the following three areas.

Difficulties in the writing process
Students say that they are unaccustomed to reflective writing. Not knowing what to write makes it hard to get started. Students also express a lack of confidence in writing, not trusting that their writing is good enough and being unsure of what is expected

Difficulties to integrate in their studies
Here students talk about difficulties in changing study habits taking the time to write. They get started to write but have problems to maintain their writing due to a lack of self discipline and that they forget to write. It is also mentioned that their documentation not have been used in the base group during the course

Lack of motivation
Students describe difficulties to understand the purpose and they can not see the benefit or need for themselves. Most students regard reflection as important, but that they don't need to write

because they keep it in their head. Those who answer that they don't see any benefit have usually not been using a reflective writing. Still, many of these students express that they believe that it can be a good thing later in their studies. Some students bring forward the importance of writing for their own sake and that it should not be mandatory. But students also say that they need it to be mandatory and that it helps them to really do it.

Students' evaluation at the end of semester one and two, shows an increase over time in how students value the use of reflective tools. They report that using a thinking journal becomes more concrete and meaningful related to clinical placements and they discover the benefit of keeping a portfolio when they look back at a longer period of time. This change can be seen especially in the Physiotherapy programme (figure 5 and 6)
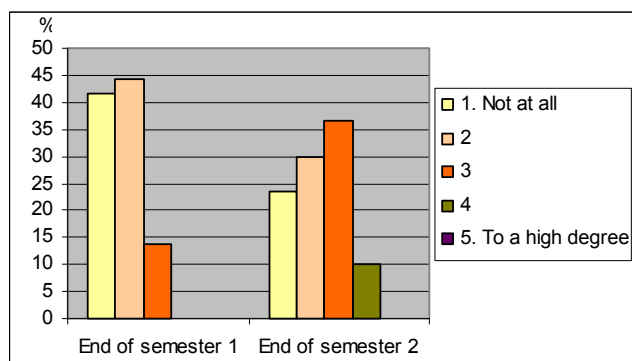
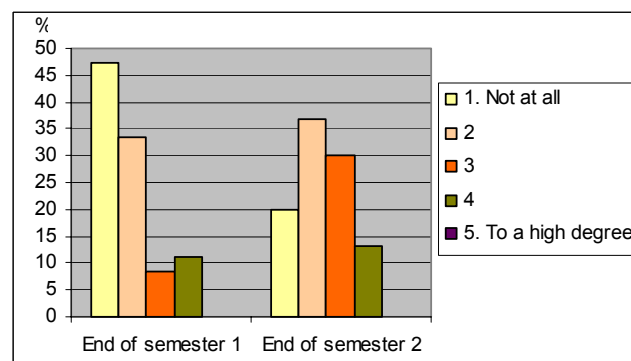Figure 5. Physiotherapy students´ evaluation of the value of using thinking journal

Figure 6. Physiotherapy students´ evaluation of the value of using portfolio

Teachers' experiences of using reflective writing and portfolio

Most teachers express that they are generally positive about students documenting their learning. In teacher evaluations from HEL1, many tutors describe the value for themselves as tutors in the base-group and for the students.

- *Increased insights*
  "I get to know students better."

  "I have gained greater insight and understanding of students' situation."

  "Very interesting to read, students surprise me that they have understood and can express their learning in words."

  "Students' documentation has been a goldmine for me as a tutor. To see individual students go from chaos to some kind of structure has been a help for me to understand how I can act and how I really did act as a tutor."

- *Using students documentation in the tutorial process*
  "Students' writing has been a good support in group discussions about learning."

  "Most valuable has been to sit down at the end looking back and discuss their experiences and development."

- *Supporting transition*
  "I think students get a grasp of things much quicker and can see coherence easier."

  "Students have been more prepared to discuss their experiences and it has been easier for them to discover difficulties they have."

- *Supporting critical thinking*
  "Students make a much better and deeper evaluation and can see the value of the course."

- *Making development visible to students*
  "My experience is that it is good; every ones´ development becomes visible in the group."

  "The greatest benefit for the students is that they can se that they have developed during the first eight weeks, both their knowledge and as human beings."

Teachers also report about difficulties and obstacles they have encountered.

- *Student motivation*
  "The most difficult part has been to motivate students keeping a thinking journal."
- *Lack of time and space*
  "Difficult to squeeze in something new in an already tight course curriculum."
- *Student integrity*
  "What I feel has been most difficult is the balance between personal reflection and what can or ought to be public in the group. Some students have difficulties in judging this."

Discussion

Analysis

Student transition

Students' documentation from the first year contributes to an improved understanding of the students' transition process in this specific context. In general students give a more positive picture than we previously had thought. Students bring high expectations and they describe a confidence in the new learning environment. The educational setting with PBL gives students good support mainly through the base group and they report early major changes in their approach to learning during the introductory course HEL1. The integration of students from all programmes and the content gives a good foundation to reflect on their educational choices and future professional roles and to develop new perspectives.

An important part of student transition seems to be the struggling with their development of independence and responsibility in learning. This can be seen as a theme in much of students' documentation. It is often accompanied with a feeling of chaos and frustration that students report in the beginning, which we believe must be seen as natural in a transition process. Many students describe how things have been resolved and the feelings of success and self-confidence it brings to their learning process. Silén (2000) describes this as an important phenomenon related to student-centered learning. She shows that students´ conceptions and experiences of independence and responsibility create a dialectic relation between chaos and cosmos which becomes a significant driving force in the learning process.

A great deal of the students' documentation shows good insight and ability to reflect on their own development and what they need to learn. But they are uncertain about what to focus on in their learning and development and to ask the right questions. They also seem to underestimate their ability to assess themselves. The findings in students´ documentation indicate that a demand for reflective writing and good opportunities to get feedback are important factors to support this development.

For the students to create an ownership in the learning process in collaboration with peers and teachers it is essential to be able to communicate conceptions, expectations, demands and experiences during the transition. Through students´ documentation we have learned more about what students of today bring into education and their encounter with the new learning environment. The implementation of reflective writing and portfolio into curriculum has highlighted the importance of supporting students' personal and professional development. Hopefully it also may ensure that teachers continue to learn about students' thoughts and development, so that learning/teaching can be communicated and developed.

Students' conceptions of their future professional role and their thoughts about gender and power issues have not been analysed for this report. But we can see from students' documentation that these issues are important for students to reflect on. There seems to be a

great variation in how they perceive the various professional roles within the health care sector. The interprofessional setting in HEL gives a good foundation for reflection on own and other professions. An early encounter with professionals in field studies and practice also seems important to challenge students' beliefs.

The significance of reflective writing and using a portfolio

The guiding thought for implementation of the project was to use and develop existing structures and opportunities that PBL and IPL brings. Essential for the project was to build on students´ work in the base group and to support tutors in facilitating student documentation and reflection. The findings show that the base group is an important context for reflection and feedback to students and that the use of students' documentation gives an added value to reflection. The introduction of web based discussion forums to support student documentation and sharing of reflections has showed to be an essential tool for students and teachers.

Experienced tutors have noticed differences in the way students reflect about their learning and that they discuss how and what they learn more often. Students' reflective summaries show that many students reflect on their learning and development on a metacognitive level. For some students, writing evokes many emotions and resistance, while for others, is seems a natural thing. Most difficult has been keeping a thinking journal. Students refer to difficulties in the process of writing, problems to integrate writing in their studies and a lack of motivation. Even if some students have not been positive towards writing, they have formulated very insightful thoughts about their learning, profession and gender. Much of the value and meaning of the thinking journal and the portfolio comes with being able to look back. Most students realise this value even if they have difficulties in writing. They also seem to discover that the benefits of journals become more obvious related to concrete experiences and practice.

One part of the project idea of working with portfolio, was to use interactions in the base group as an important part of students reflection. It has shown that some teachers and students think about writing and reflection mainly as something personal, referring to the importance of integrity. A few tutors have also experienced students having difficulties with keeping a balance between what is private and public. From evaluations it seems that sharing of documentation give students' very concrete feedback and confirmation about not being the only one feeling chaos and frustration. Our interpretation is that it is a low degree of readiness among tutors how to handle situations in the base groups, using students' documentation for common reflection and feedback. Finding ways to use students´ documentation is also an important issue in motivating students to write.

Teachers/tutors have an essential role to motivate and support students in their writing. We can see that if the teachers give prerequisites for reflective writing, students take the opportunity. To be successful, it seems very important that teachers use reflective tools in their own learning. The prerequisites for the teachers involved in the project were not optimal from the start. The limited project period made it difficult for teacher to have enough the time to feel prepared. As we have tried to work with an action research approach in the project, we have tried to support teachers throughout the project.

Implications

The context with PBL and IPL has served as an important framework for the project idea and innovation. Structures for students' reflection and documentation in a portfolio have been implemented into the curriculum in the introductory course HEL1 and for the first year in three of the programmes. The project has helped to put the pedagogical reflection and discussion on the agenda and has created a foundation for further development at the whole faculty. An increasing amount of teachers and students are now getting experiences of reflective writing and

portfolio. Teachers are becoming more aware of the importance of what students bring into education and into different learning situations and they ask students to reflect on action more frequently.

In addition to working and evaluating the means for reflection, as teachers, we must continue to learn through students writing and reflection – their thoughts, needs and aspirations – during their learning journey through higher education.

Our experiences from implementation of the project have also highlighted a couple of issues, important for future educational development projects. One is the involvement of teachers and students in planning, implementation and evaluation of the project. We have experienced difficulties getting student representatives and to get teachers engaged in the innovation, despite a positive attitude. We believe that this is a matter of time and resources for teacher to get involved, but also a matter of ownership in the change process. We have tried to deal with this putting an emphasis on building on already existing learning and teaching activities. Another issue is the importance to discuss, define and concretise concepts used, in relation to the specific context. In planning the project we discussed the choice of concepts and decided to use thinking journal and portfolio as concepts in the project. We have experienced a great variation in how these and other concepts are perceived.

Conclusions

The project has shown that reflective writing and the use of portfolio has great potential as tools for student learning. Besides, it serves as means to increase our understanding of student transition and development.

In implementing and using reflective writing and portfolio as tools for learning, new meanings have been visible. Five different aspects have been identified as important for understanding and making use of the potential of a learning portfolio:

- the activity and process of writing, formulating thoughts into text
- the collection of items in a portfolio as a basis for:
    - own reflection; looking back, monitoring over time and planning
    - discussion and mirroring in a small group
    - formalized feedback and assessment
    - feedback to teachers and the educational programme

Some of the most important future issues related to these five aspects are to:
- build on and make better use of what students bring into education
- make diversity explicit and make good use of it for professional- and interprofessional learning.
- stimulate students to reflect *for, in* and *on action* to make the most of different learning situations, both formal and informal.
- develop a greater variation of activities for writing and reflection. This can include using individual and group documentation, using a variation of focus and form for writing and using different kinds of documentation like audio, video, pictures and drawings. Students´ documentation also has to be used in different ways
- make better use of the interactions in the base group, in order to support reflection and to provide enhanced feedback.
- develop a more systematic approach to reflection that helps students and teachers in monitoring learning and professional development on a continuous and coherent basis.
- integrate portfolios as an important part of student assessment.
- develop the use of e-portfolio to facilitate collection, sharing and feedback, presentation and assessment.

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