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The peer groups bridging the disciplines and social contexts at higher education

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The peer groups bridging the disciplines and social contexts at higher education

Abstract

The aim of the study is to promote understanding of peer groups meanings from the students' point of view. The research task is to find out teacher students' conceptions of the andragogical peer groups in the health science teacher studies at university. Teacher students' peer groups are based on andragogically formed principles. The participants are (65) health science teacher students, who have started in 2009-2012. The data (578 written pages) was gathered by using essay writing in the end of their one year teacher studies and analysed by a phenomenographic method. The results are three hierarchical categories of peer groups meanings description 1) Value of otherness in participation the peer group 2) Otherness in peer group as mirror to personal teaching; 3) Community as the basis for a high-quality education. The results of the study indicate how and why teacher student's peer group is significant in andragogical teacher education.

Key words: peer group, teacher students' learning, phenomenographic method

Introduction

Teachers are examples of students, so their activity is also guided by the expertise of the future. In this research we see the development of expertise as human's lifelong learning. Learning can be viewed as individual, group-based, inter-organizational or regional. To be a regional network expertise it demands also autonomous, expanding expertise. (Piirainen & Viitanen 2010.) Learning through work and learning at school are very similar (Tynjälä 2008). It has been shown that diverse types of informal learning also take place in communities along with new discourses (Eraut 2004). Especially recently attention has been paid to learning in networks and regions, for examples, shared expertise and "innovative knowledge communities" (Tynjälä 2008). Shared expertise can be regarded as a pedagogical practice, in which responsibility and knowledge are shared between the workers. The members motivate each other, provide feedback and jointly steer the common functions (Nonaka & Konno 1998; Penttinen et.al. 2013). Expertise as a community process develops expert communities rather than individual experts in specific fields. (Bereiter & Scardamalia 1993; Bereiter 2002.) Community process can take place also in education. Individual and expanding substance is the opportunity to increase participation in decision-making and to ensure implementation of effective practices, ideas and projects (Jackson 2000). Shared expertise is considered a crucial element in shared leadership, community knowledge and the creation of a learning society (Wenger 1998; Scott & Caress 2005). It has also been a common andracogical principle at least in Northern countries (Grundtvig 1929, Lindeman 1961/26). To share expertise demands also personal self-directed/regulative learning, which has been the main idea in western adult education since Knowles (1975; Eekelen et.al. 2005; Savićević 1999; 2008).

The term 'peer' refers to a teacher students' with a comparable education level (fig 1). The awareness of 'peerness' is the basis for peer group processes (Sunwolf 2008, p. 2.) The members of the peer groups are different persons, who are in the same situation. But peerness can also develop to exploit shared knowledge as in team work. (Sunwolf 2008, p. 19). But groups can also be challenging learning places, when the interaction with others enforces group processes to the unknown direction (Isaacs 2001 pp.247-256.). The 'sameness' can enforce social support

also within the groups. Members of the group must consider one another to be equals in at least one particular element which can be shared within the peer group. Members of a peer group share one common factor, which can be age, background, experience, social or other situation, etc. This does not need to be shared at every moment, as long as there is an agreement of the common or effective guidance in higher education requires particular knowledge of small group instruction. (Sunwolf 2008, pp. 19-20.)

The activities of group work in teacher students' education are based on ideas of cooperative learning (Johnson & Johnson, 1982); the participants support each other as they learn together. Group activities also aim at empowering individuals and intended learning outcomes are personally meaningful, in response to the needs and personal growth of the individual (Colvin & Ashman, 2010). Peer group can so be seen as a place to share experiences, to get emotional support and feedback from each other, to obtain new perspectives and increase one's consciousness, to acquire important social skills and confidence in the future, and to effect changes in attitudes and behavior (Coman et al., 2002; Hiltula et al., 2012; Penttinen et.al. 2013; Symes 1998). Peer groups are widely and systematically used in the contexts of social and health issues (Kettunen et.al., 2006; Wallin et.al., 2009), advancing new higher education bachelor students to the academic student life (Skaniakos et. al. 2013) and teachers peer support (Heikkinen et.al., 2012; Piirainen & Skaniakos 2013).

Small group counseling requires particular knowledge sets and skills of the instructor. Borgen et al. (1989) suggest several necessary steps for the group counselor to effectively promote group work. These include planning learning activities to develop new knowledge, skills and attitudes. To successfully carry out these activities, the group counselor should have the personal skills of directing, influencing, assisting and delegating group processes. The group counselor should also have micro-level skills of reaction, interaction and action in order to be able to respond to the needs of individual group members. Counseling should be done in regard to the needs of participants, in order to fulfill their individual expectations. In addition, group counseling also demands an understanding of the different stages of group development. Design of the group includes structuring activities to support its goals. All of these are done in correlation with the members' needs for social and cognitive support. The peer groups as pedagogical practice has

discussions, which gave opportunities to construct a mutual understanding of the discipline field and possibility to identify your experts during the group sessions (Penttinen & Vesenkari 2013). If teacher students' education in peer groups is mirrored partly on the model of small group counseling, it is no wonder that peer groups can be common learning situations for teachers and according to Burr (1995) possibility to get contextual social perspectives.

Figure 1 The several groups in health science teacher education at university

The health science teacher education has five different kind of small groups, which have different tasks for learning and collaboration development (see fig 1). The smallest peer groups is the book clubs, which are formed as counseling small groups, where the students themselves forms the group and how to learn the books concerning learning and teaching phenomena. The learning groups are concentrating more to the learning process, when the subject of the group's session is more reflective learning from student's point of view. The experienced teacher is the instructor of the learning groups and takes care of the timetable, participation and answers the questions concerning the teachers learning and practicing in real school environments. The study groups are formal educational groups from all health science teacher students', which has curriculum accepted by university health science department. The lecture group is largest and it concerns the whole university andracogical teacher students', from all departments. (see fig 1.)

The aim of this study was to promote understanding of students' peer group. To reach this we find out teacher students' conceptions of the peer groups in the end of their health science teacher studies at university. The Teacher students' programme is based on andracogical formed principles: continuing personalized learning, inquiring attitude, dialogue.

Methods

The participants in this study are students, who have been chosen to be educated in andracogical health science teaching (n=65). The data were gathered by using essay writings (Richardson &

St.Pierre 2008) one diary and portfolios' from the same (n=65) (n=52, 88% women and n=14 men, 22%) teacher students', who had started their master level health science teacher studies at University between years 2009-2012. The essays were written in the end of their studies the theme was reflect your learning to be a teacher and what was the meaning of peer group in your learning. The whole data is 536 written pages. Ethical approval for the study was obtained from the ethical committee of the University and the students gave their written consent for using the data in publications.

The data was analysed by a phenomenographic method, which focuses on variation in human meaning, conceptions and awareness of experiencing a phenomenon as in this research the peer-group in teacher education. Different ways of understanding phenomenon can be categorized according to the awareness shown by key aspects of the phenomenon (Marton & Booth 1997/2005). Key meanings are described as themes and as variations of these themes, which then are formed into hierarchical categories of description. (Marton & Pong 2005) The research data is collected writings of individual experiences, and the aim is to emphasize the whole as well as the parts in a single outcome space of variation. This was achieved by taking a collective way to experiencing peer groups. The focus is to find out systematic relationship between different meanings, the phenomenon. Due to the hierarchical nature of the categories, some conceptions of peer-group can be regarded as more complete and more complex than others.

The result of the phenomenographic analysis is summarized in figure 2 and in table 1. Figure 2 shows the identified descriptive categories and their structural relations, whereas table 1 presents the themes of variation. The descriptive categories do not represent the conceptions of individual students but relate to the variation in the students' conceptions of peer groups identified in the research data of this study. A theme was formed whenever there was enough evidence that an overall expression of meaning had been distinguished (Marton & Pong, 2005); and next, a draft set of descriptive categories were defined, refined and named. The second phase of analysis focused on identifying the structural relationships between the identified categories. In other words, the three categories describe the peer group on collective level (Marton & Booth 1997/2005). We refer to these aspects as themes of variation. To confirm the results during the analysis, the process of re-reading the original essays was repeated until there was no significant change in the types of categories being determined. The set of categories based on the analysis,

but they are not determined in advance (Åkerlind 2005, 2008). During the analyze process we went back and forth to the original data to confirm the results and minimize the influence of our own viewpoints (Åkerlind, 2005).

Results

After the whole four steps phenomenographic analysis the results of the study showed, that the six emerging peer group's themes were the nature of knowledge, nature of reflection, change of perspectives from learning to teaching, situation, the nature of ethic and cooperation. All these six themes seemed to vary as three stages. Based on the descriptions of these themes variation, I was able to group together and distinguish varying ways of understandings. Three hierarchical categories of peer group description emerged: I) Value of otherness in participation the peer group quality education II) Otherness in peer group as mirror to personal teaching; III) Community as the basis for a high quality education. (sewe fig 2) The hierarchy of categories means, that in the category of III Community as the basis for a high quality education has categories II and I in it. Same teacher student can be at one theme on category I and at another theme for examples ethicality theme in category III to be a responsible from her/his own learning to be a teacher and keep her rights to study more and take care of other members learning possibilities and rights. She can even get others the same practice possibilities than she has herself. The categories are common conceptions of peer group.

Here Figure 2 The hierarchy of peer group categories at teachers' higher education.

I Value of otherness in participation the peer group

The categories differ from each other's so that in first category the peer group is a possibility to participate together with other familiar, in same learning situation being students, and continue learning during education. It is significant to learn to be a participant in the group with members from different health science disciplines, different teacher experienced, age and family

relationships. The teacher students reflected how I grow as a teacher in future and be a group leader. It is important that colleagues to create teachers own growth. They feel that they have right to learn and practice the cooperation and interaction skills in familiar group. Teacher students experiences the book club and sometimes also learning group as peer groups, which are the smallest groups in teacher education. The sameness creates them common atmosphere, safety situation to experience and practice teaching methods, being in front of student groups, right to teach and lead the learning situation without stranger to be diminishing. (table 1.) The students wrote that this is the first stage to ask own question and listen others in the group to beginning to be a shared expert as a professional teacher. Teacher students wrote the differentiations between peer group and group work as teaching technique. They didn't seem to accept the group working teaching technique, but they like to participate to their teacher student's book clubs and learning groups. (table 1.)

First theme was the nature of knowledge were the variation is from students own way of knowing; the practical knowledge is suitable also to the students. And the teacher's differences are starting point for learning to be teacher and have Own learning experiences form teaching methods. The next authentic citations of teacher students' describes the way the first category Value of otherness in participation the peer group find out:

> *"I can practice teaching in our learning group and in the group work we can concentrate how to teach different things. We can handle common problems in teaching and how to manage or rid them. Everybody of us has our own way of seeing and experiences from good teaching, but however we made different creative solutions as learning group to the teaching."* (Linda 2013, d7)
>
> *"I am natural and casual teacher who realize my own ignorance in our learning group…***"** (Aaro 2010, d2)
>
> *"I have now right to learn to be a teacher. I have to know my presuppositions…"* (Toini 2010, d3)
>
> *"I think, that teacher cooperate and motivate students by asking questions.*" (Maria 2011, d1)

(The first names of teacher students' show only the male of students (Aaro is a man) and the number after name (2010) show in which year the student wrote this. The d is diary and the number after that shows the page number in which this citation is.)

II Otherness in peer group as mirror to personal teaching

The differentiation between first (Value of otherness in participation the peer group) and second (Otherness in peer group as mirror to personal teaching)- category is the possibility to be a part

of developing group to see yourself as familiar mirror and get critical evaluation and questions from others. Teacher students found the peer group larger than only book club (see fig 1.), also learning group and study groups can be spaces where students reflect their own action or ideas about contents or books you had read. The demanding is shared and creative atmosphere, where the teacher students asked and allowed others saw them as teacher before classrooms and other learning situations. The whole group are working together and have sometimes flow action. Group can have troubles, but those does not split or crash the team. Group can solve problems together without help outside and evaluate the solution together in face-to-face meetings or with social media. The common understanding feed the group members feelings of sameness and otherness. The teacher students' common understanding allows also critical cooperation and the members of the peer group try to bring the ideas outside to other clinical education groups and teacher communities. But they also want to reflect experiences in their own peer group. Changing from teacher students learning to personal way of teaching started and students prove also the power of teacher in own practicing. Then the peer group is widening so that also other education situations in different context are spaces for learning new teaching methods etc., which growth the confidence to be a teacher in teacher communication. The teacher student wrote how peer group members' otherness is important at this category.

The critical attitude to own and others knowledge is important in peer groups were the others are as my co-reflectors and they wrote how I want peer group members to be my developmental evaluators helping me to be a good teacher. Student can understand teacher students' culture as common language with them. Common understanding let them develop their teacher ships together. The next authentic citations of teacher students' describe the way how the second category Otherness in peer group as mirror to personal teaching found out:

> …*"the meaningful things developing my own learning to be teacher, and I think those are also meaningful to others in my learning group, has been to do the teachers practical placeman in real high school and the evaluation conversations after that in my peer group. I hope that these are going to continue in this education, because they have been spaces for critical reflection, what have I done, why, what others thought about that? Those situations have strengthened my self-efficiency knowing and developed me- so I mean the real ways of my developing."* (Saara 2013, d10)

> *"The teacher education changed my way of teaching. Common videotape analyses were my best learning experiences, where we share thoughts and experience s of responsible teaching with my colleagues in peer-group. It helps me to lighten my weight*," (Susu 2011, d2)

III Community as the basis for a high-quality education was the most interesting and surprised researched. Then the peer group has widened to the book clubs to the learning and study groups (See fig. 1). Even lecture group, which was the largest group in teacher education, was important space where the students critically participate to the conversation and feel familiar to be a part of this education. The teacher students creates together new teaching or learning ways or develops the whole learning situation or learning communities. The peer groups made possible to the teacher students' the common shared knowledge creation. Peer groups have been a basic idea where to practice and get courage to try and enhance teaching and even new groups in education. Students feel, that they can continue the peer group after education. They want to have own space to develop themselves and have critical ideas to develop high school system and others. Teacher students' can together create new learning situations and develop the learning communities. Then they feel that they are ready to be as teachers and even develop new ways and ideas of learning. Students realize how different opinions and attitudes can widen their own horizons of persons, teaching and learning. Peer group as shared continuing learning situation was the essential theme where the shared experienced has place to practice. If teacher students did not notice the situation, then they participate to the peer group session, but they did not want to share their personal or professional knowing in it. When students realize the honor of shared situation, then the peer groups were spaces to developing their own and others' teacher ship. (see table 1,) The teacher students' wrote about this third category of Community as the basis for a high-quality education, as followed:

> *"Teaching construct together by conversation with colleagues in community and it is very useful for my own growth."* (Hilla 2011, d3)
>
> *"Teaching is committed to different situations and also my own social learning and participating to teaching is part of it."* (Jyri 2010, d2)
>
> *"…doing together develop teaching and create interactive atmosphere. In the open space* others comment can open a nodal point and *direct the common learning"*. (Maisa 2010, d4)
>
> *"Knowledge creation together develops the whole community…The teacher education changed my way of teaching. Common videotape analyses were my best learning experiences, where we share thoughts and experience s of responsible teaching with my colleagues in peer-group. It help me to lighten my weight… The teacher can listen and be authentic attended in community when the shared teachership can develop community."* (Susu 2011, d1-2)

> *“ We together with my teacher student college tried diary as evaluation method in teaching practicing. It was a positive experience, the higher education students were satisfied and they had really thought about their own learning. I think it is very suitable way of evaluation to the psychophysiological physiotherapy subject. We have been thinking if it is possible to evaluate the learning diary by numerous way, but maybe it is more meaningful to the student, that she can get response from her learning diary. May be it is enough if the diary handlers all contents, if not then we can ask her to continue writing.”* (Raija 2013, d33)

> *”I think, that every student, who has past the teaching, has something (conversations, written tasks etc.) to give to the education. How the education shall develop according to my or our teacher students’ group? I think that the power of community learning has been one important stand point in our teacher education and hope that it would be so also in future. “*(Saara 2013, d11)

Table 1 here Health science teacher students’ three description categories of peer group.

Discussion and Conclusion

The teamwork and collaboration is highly topical issues also in teacher education. The aim of this study is to promote understanding of peer groups meanings from the student teachers’ point of view in teacher education. The result of this study is that student teachers’ conceptions of peer groups had six themes and phenomena of peer group widens to the sameness, otherness and shared developing, from participating different communities to the reflective teaching partnership and the most meaningful peer groups made student teachers’ to develop learning communities and create new communities in higher education. This study found out, that peer groups are important spaces during teacher students’ learning process. Groups are situations, where students felt sameness and differences to reflect their own action in familiar space, where is trustful atmosphere, possibilities to dialogical conversation and evaluation. So in the peer groups students developed own teachership with others and develop it further by being active evaluating team. Peer groups made also possible to create other teams in schools and research groups.

The results of this study showed, that the different peer groups in health science teacher education at university seem to give teacher student’s opportunities to experience student-center education. But the peer groups, which gave been more counseling purpose (Colvin & Ashman 2010, Coman et. al. 2002; Hiltula et. al., 2012; Penttinen et al. 2013; Symes 1998) as book clubs and learning groups are spaces where the sameness seems to be most important to share

knowledge, reflect own social growth and own learning process to be a teacher (table 1 themes) and bridging the line of disciplines. But the health science teacher students' conception does not have therapeutic purpose. The results of this study can be compared to Åkerlind's (2011) argumentations that awareness from own learning to other's learning mirrors my change by the process. The second-life learning spaces are challenges for teachers; there the peer groups are going to be more important and also creative learning situations (Nussbaum et.al 2009), where they can bridge the social contexts.

Here Figure 3 **The peer groups bridges I-III at higher education.**

According to the results of this study the peer groups have three different main aspects of themes, which can be developed in higher education. One is the social growth as a person by participating in the familiar friends group, which have same interesting points and regular meeting times. The second is the willingness to learn to be and behave in different groups as expert or leader and have well cooperation skills to be able to bridge different social contexts. The teacher as counter or instructor is part of new student-centered teaching. Åkerlind (2008; 2011) has awaked also this kind of conversation according to her studies. The third is the learning process to become a good teacher. In this process the others in peer group and their responses and peer evaluation and dialectical discussions are important part of peer groups. Peer groups atmosphere is most important to dialogical conversations and openness to otherness in group, where you can be opposite and argue from your point of views to be able to bridge different disciplines (see fig 3). The andracogical experimental learning theories (Knowles 1984) and situational learning (Malinen 2000; Jarvis 2006) highlight this kind of critical reflection or cognitive dissonance (Engeström 1987)

In this study, phenomenography was chosen as the methodological approach in order to catch the variation in teacher students' understanding of the peer group phenomenon. In most phenomenographic studies, the data on students' conceptions are gathered via interviews. In this

study, we decided to explore the feasibility of essay writing for this purpose, because writing has been proven to be a functional tool for reflection and learning (Tynjälä et. al. 2001).The data of essays proved to be versatile and descriptive. We believe that writing diaries and portfolios encouraged the students in our study to reflect on their experiences of the different aspects of peer group in a similar but more defined way as dialogue through interviews might have (Marton & Booth 2009, p. 130). Åkerlind (2005; 2008) also emphasizes that essays can be an expressive medium through which individuals can report about certain aspects of their individual world.

We shall see further if the new way of learning-centered teaching can so change also the higher education. Then the focus in teaching can be the students learning. (Åkerlind 2004; 2005; 2011) For example, the reflections on Finland's top success in PISA studies (OECD 2006) have emphasized that in many aspects the Finnish education system deviates from practices typical in many other Western countries (e.g. Sahlberg 2010). Therefore further research is needed to understand teacher students` conceptions of peers and otherness in different cultures and education systems as well as in other domain and professions.

This study had focus only to health science teacher education at university, so it is interesting to continue this research to other teacher education and other cultures to find out if this peer groups is only Nordic phenomena and what other meanings the peer groups get in other educational groups as folk high school (see Kulich 1984; Penttinen et.al. 2013; Penttinen & Vesenkari 2013). Also more research is needed to found out how the teacher is participating in peer groups. Peer groups are only one part of teacher students learning so we need more research to develop teacher education. The results of this study indicate how and why teacher student's peer groups have different kind of significantly in bridging the disciplines and social contexts at health sciences higher education.

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Piirainen 2013: Figures and tables

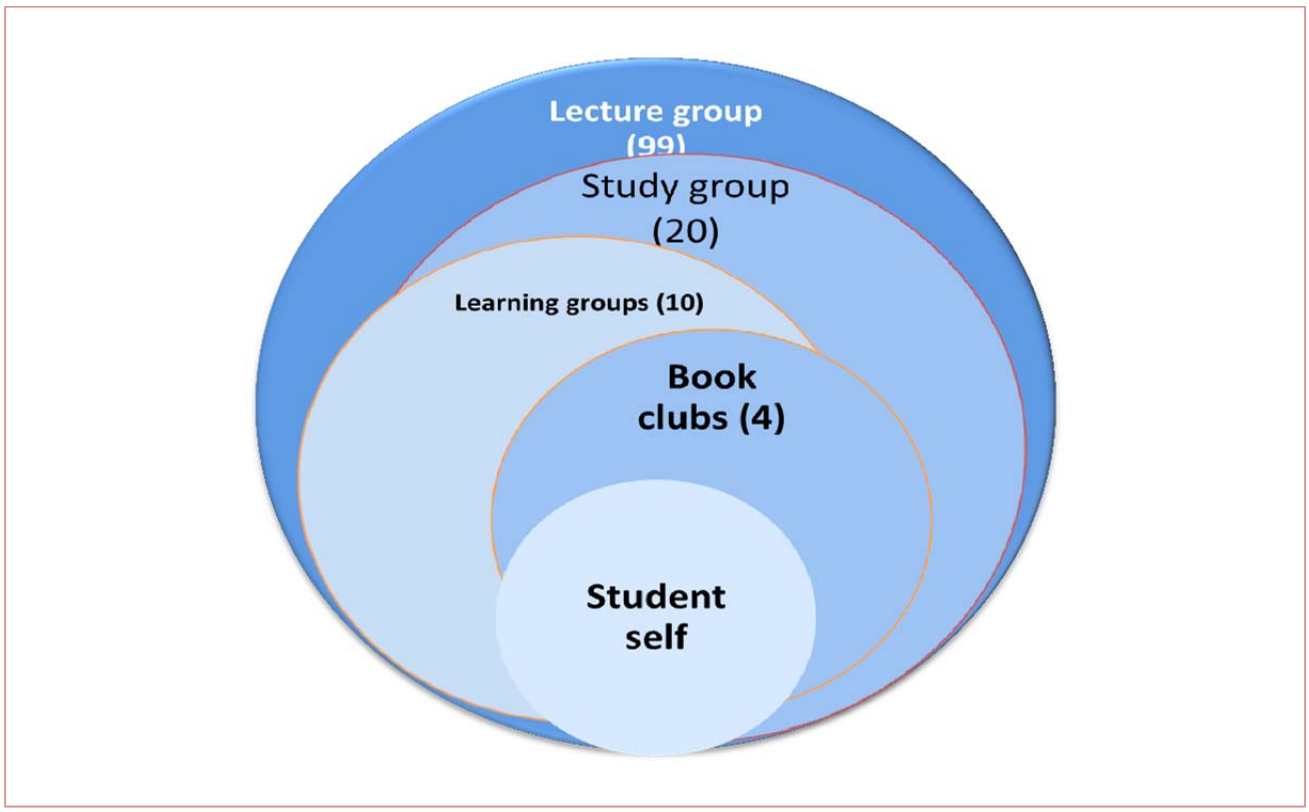

Figure 1 Different group in health science teacher education at university and the number of members.

Table 1 The health science teacher students' three categories of peer group's meanings.

Themes and variation of themes	**I Value of otherness in participation the peer group**	**II Otherness in peer group as mirror to personal teaching**	**Ill Community as the basis for a high-quality education**
Nature of knowledge	Practical knowledge for teaching	Critical knowledge in group	Embodiment knowledge
Nature of reflection	Teachers differences	Others as my mirror	Developing in peer-group
Learning to teaching	Own learning experiences form teaching methods	Teaching with others	Situational teaching
Situation	Create common atmosphere	Group learning space	Common space to develop
Ethicality	Right to learn and teach	Peer evaluation of own teaching	Share responsibilities to teach and learn
Cooperation	Ask questions and listening others	Share common language	Develop community together

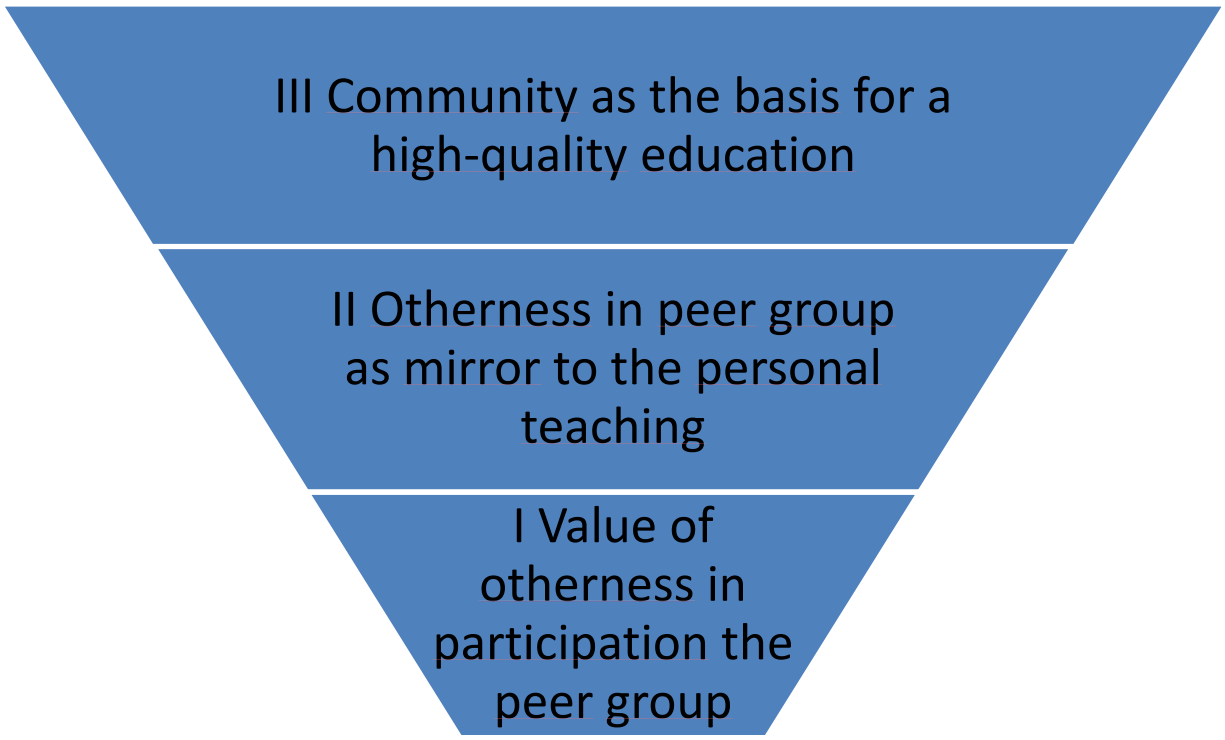

Figure 2 The hierarchy of peer group categories at teachers' higher education.

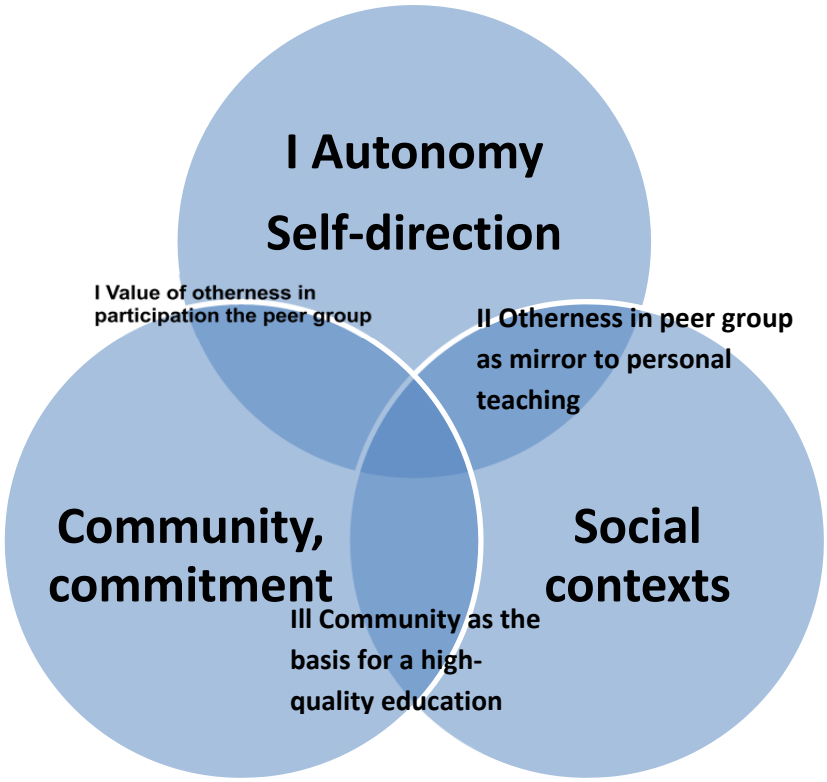

Figure 3 The peer groups bridges I-III at higher education.