Interdisciplinary team education promotes innovations in the home care of older people

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Abstract

This article describes a new type of team training that involves undergraduate students of medicine, students from the Aalto University (industrial engineering and management, architecture, information networks, collaborative and industrial design and bioinformation technology) and specialized home care nurses. During the course, the students learned interdisciplinary teamwork and created innovations in the care of older people. The 18 participants formed six microteams (three persons in each team: one specialized nurse, one medical student and one from Aalto University). The course consisted of two seminars and three full days of home visits to older people's homes. Participants were encouraged to make one innovation in each home visit that would improve the older person's wellbeing or streamline the processes of home care. During the course the participants promptly formed tight teams. They valued the know-how of the other team members and learned openly from each other. They also created a number of practical innovations in home care which they presented to executives of older people's care in a final seminar. The course received very good feedback from the students.

This course is an encouraging example of how gerontological interdisciplinary team training may be successfully applied. The article describes both the learning outcomes and the innovations the students produced during their home visits. It also discusses the learning theories behind effective interdisciplinary team learning.

Key words: geriatric education, team training, home care, innovation

Introduction

Future doctors, geriatricians and health and social care professionals need new types of skills and know-how in order to cope successfully in their work (Frank, Snell, & Sherbino, 2015). Geriatricians and gerontologists need interdisciplinary team working skills, and they should also be able to work with professionals other than those in health and social care (AMA-Wire, 2017). Interprofessional education has originally been defined by the WHO Framework for Action on Interprofessional Education and Collaborative Practice in 2010 as occasions when members (or students) of two or more professions learn with, from and about one another to improve collaboration and the quality of care (Hammick, Freeth, Koppel, Reeves, & Barr, 2007; Hean, Craddock, Hammick, & Hammick, 2012).

Today the term "interdisciplinary" is used instead of "multidisciplinary" teaching (Hammick, Olckers, & Campion-Smith, 2009). In multidisciplinary teamwork, each discipline is allowed to contribute its particular expertise and the members work side by side, whereas in interdisciplinary teamwork the members work closely together and communicate frequently to optimize the patient care (Hall & Weaver, 2001; Hammick et al., 2009; Hean et al., 2012).

Interprofessional or interdisciplinary education is not new (Satin, 1986; Clark, 1996), and it is fairly widespread in the USA, Canada and Japan in basic medical education (Ahn, Barzansky, Hunt, & Nara, 2017). Several systematic reviews have explored team education (Chakraborti, Boonyasai, Wright, & Kern, 2008; Olson & Bialocerkowski 2014; Reeves et al., 2016). However, most interdisciplinary training has taken place in acute care contexts (King & Magus, 2015) and there is a lack of studies describing interdisciplinary learning in gerontology, especially among undergraduate students. Most of the earlier studies have focused on improving students' attitudes towards older people (Basran et al., 2012; Koh et al., 2015; McManus, Shannon, Rhodes, Edgar, & Cox, 2017), but few prior studies have focused on the training of interdisciplinary team working skills (Mager,

Lange, Greiner, & Saraci, 2012; Balogun, Rose, Thomas, Owen , & Brashers, 2015). Furthermore, all these prior studies have only included health care professionals as learners (Mager et al., 2012; Basran et al., 2012; Balogun et al.; 2015, Koh et al., 2015; McManus et al., 2017).

The number of older people is currently increasing and in the future more of them will be taken care of in their own homes instead of institutions. Along with the increasing number of older people the overall burden of disabilities and need for home help will be greater than before. New perspectives and innovations are therefore urgently needed to tackle the challenges of older people's home care. Geriatrics and home nursing care is based on interdisciplinary team work. The aim of interdisciplinary geriatric home care is to enable older people to live meaningful lives at home.

A new course was created with the aim of enhancing undergraduate students' interdisciplinary team working skills in gerontology and promoting innovations in older people's home care. The course "Enhancing older people's meaningful life through innovations of microteams" was a collaboration between the University of Helsinki (authors KHP, TL), Aalto University (SI, IT, TV, ES) and Helsinki City Home Nursing Services (HFS). For the course work, the medical students, Aalto students and specialized home care nurses formed three-person microteams. The aim was to create new innovations that would enhance person-centered care, improve older people's wellbeing and quality-of-life and streamline the processes of home care. In this article, we describe the development and implementation of the first course, the innovations made and the students' course feedback.

The development of the course

During the development of the course the medical students and the Aalto University students (SI, TL, IT, TV) were invited to describe their learning needs and offer ideas that were then taken into account when setting the learning objectives of the course. Figure 1 describes the development process of the course.

The target group of the course comprised Helsinki University undergraduate medical students from the 1st to 6th year, Aalto University undergraduate students (School of Arts, Design and Architecture and the School of Science), and specialized home care nurses from Helsinki City. They formed interdisciplinary microteams of three persons representing home care nurses, school of medicine, and the Aalto University. The main structure of the course consisted of two seminars and three full working days of home visits by the microteams to older people's homes. From the point of view of pedagogy, a key decision in the opening seminar was to keep instructional content to a minimum. Instead, a major emphasis was placed upon the orientation of the students to the upcoming project and to the attunement of the participants to one another as well as to the “larger-than-life” possibilities of the tasks at hand. The philosopher, Esa Saarinen, provided a broad frame of humanity to the personal and emotional aspects of the participants in the context of the course.

The participants were encouraged to make at least one innovation during each home visit that would improve an older person's wellbeing or the process of home care. The participants wrote reflective diaries about their home visits, shared the diaries within their microteam and synthesized them into team diaries. The team diaries were returned to the teachers (KP, HFS, ES), who read them before the final seminar. In the final seminar the participants gave a presentation on what they considered to be their six best innovations. Some executives of older people's care in Helsinki were present at the final seminar to listen to and discuss these innovations.

Implementation of the course

The course took place over 20 days in May 2017 with a total of 18 people participating. The course started with an inspiring seminar led by Esa Saarisen and held in a relaxed environment at Aalto University (See Figure 1). Each of the professors involved in the course demonstrated their own personal and emotional commitment to the significance of older people’s care. Saarinen's "life philosophical lectures" have been very popular at Aalto University. The themes of his lectures and

seminars have covered the whole spectrum of life, including work, life, human relationships and reflections on one's own attitudes and values. The idea behind the life-philosophical lectures is to approach life and humanity extensively, comprehensively and non-instructively. His seminars stimulate participants to reflect on their own thinking and encourage them to live life according to their own values (Saarinen, 2015). In the present course, the participants were encouraged and instructed to be open to perceptions and to listen carefully to older people in order to understand their experiences (Saarinen & Lehti, 2014; Alhanen, 2016). Table 1 lists the main principles of Saarinen's life-philosophical lecturing. The course participants also received articles and instructions on the use of mindfulness techniques (Ludwig & Kabat-Zinn, 2008).

The seminars were experiential; touching stories and personal examples were shared and the atmosphere in the seminar was intimate and psychologically secure. At the beginning, the geriatricians (KP, HFS) shared what it was in their personal lives that had made them choose this specialty, and the philosophy teacher (ES) described his own emotional relationship with older people. The participants were encouraged to explain to each other what they personally found intriguing in older people and, in addition, they were encouraged to be responsive towards each other and open to matters dealt with during the course.

The microteams became acquainted with each other during the opening seminar. The team members were encouraged to be creative and dialogic in their teams. Hard gerontological knowledge played a decidedly minor role during the course. Next, the microteams made their own appointments for the home visits and during the visits the participants were encouraged to listen to the older people, making observations candidly, and exploring their dreams and life wishes. The home care nurses were experienced specialized nurses and they selected the home care patients.

In the following two weeks, the microteams made three full-day home visits. The team members each wrote a personal reflective diary on each visit, the aim of the diaries being to enhance

reflections on their own experiences and innovations. They were encouraged to share their diaries and ideas with their own microteams and to further develop their innovations. After these discussions the teams wrote a synthesis of their diaries (2-3 pages) for the teachers and they prepared a presentation of six innovations selected for the final seminar.

In the final seminar, the home visit experiences were discussed first. The participants were enthusiastic about their teams and they even positively competed over which team was the best and most innovative. The students praised their home nurses and showed how much they valued the nurses' competence and empathy. In the seminar, each team had 30-40 minutes to give a presentation of their six best innovations. There were 10 executives of older people's care present who listened and commented on the presentations. Finally, the seminar was wrapped up with a lecture by Esa Saarinen that appraised the experiences from a life-philosophical perspective.

Innovations

The participants' perceptions were fresh and some of the innovations were truly novel. They brought up new perspectives on older people's care and practical applications for home nursing processes. There were innovations that improved home care processes, technology that could enhance wellbeing, as well as ways of strengthening older people's active agency, developing social contacts and wellbeing. Table 2 summarizes the innovations.

It was easy for the students to adopt a patient-centered attitude in home care. They proposed that older people's wishes should be regularly explored to involve them in their own care. They noticed that older people in home care are frequently socially isolated, and the students came up with many ideas to alleviate loneliness amongst older people. Some microteams suggested making use of schoolchildren and students. For example, young people studying to be hairdressers, cooks, animal caretakers or house cleaners could do their practical training in home care services. Older people could visit kindergartens and act as "deputy-grandmas", which could benefit both parties. The

microteams also suggested expanding internet dating services to older people. The students noticed that there is a "bus phenomenon" in the older people's service centers, meaning that older people come for their lunch but most of them try to find their own table, which results in being alone. Microteams suggested that there could be two kinds of trays available in the lunch rooms: red ones ("today I want to be alone") and green ones ("today I feel like chatting"). The ideas for enhancing older people's active agency also included societal innovations and company branding.

The students pointed out several problems in the processes of home care. They suggested ways of increasing the length of face-to-face meetings between nurses and home care patients and ensuring that nurses visit the same clients from day to day. Acquaintance and confidence between clients and nurses could make the whole home care system more efficient. The students suggested an electronic controlling system to optimize the visits of a "family nurse". The present electronic controlling system measures the time spent at the patient's home. This means that all the patient records are written during the visit on mobile phones. Furthermore, a lot of the nurses' time is spent on checking medications. It was suggested that the electronic controlling system should measure the quality of care (e.g. turnover of nurses) rather than the time spent on patients. The students suggested classifying client processes more clearly in order to improve the predictability of the time spent at a client's home. In addition, older people should be given tablet computers which send messages, which could include the nurse’s face, if the nurse was going to be late. This might decrease the number of phone calls and the time spent on checking. The students also proposed peer-learning for the nurses, for example, by sometimes making home visits in pairs, getting ideas and learning from each other. Home care managers should also make home visits to see the reality of life in older people's homes. Another idea was to extend the present service spectrum. Some older people would benefit from a service catalog that would include all kinds of private services, such as walking company, sauna bathing, etc.

The technological devices that were suggested included an electronic brain-storming board on which older people, nurses and relatives could all put their ideas for improving home care. Managers and nurses should meet regularly to screen these ideas. Technological devices also included “smartdispensers” for medicines, which would decrease the nurses' work and medical errors. Virtual reality glasses were suggested for older people so that they could ‘visit’ places that had been significant to them, or view concerts or the theatre. In addition, voice command devices would help older people to use the various technological devices more easily. GPS trackers should be used more to enable people with dementia to move about more freely. In addition to following movement and exercising, electronic bracelets could also monitor various vital signs.

Feedback on the course

The participants gave very positive feedback on the course. The overall rating for the course was 4.7/5 on a Likert scale. The participants were invited to evaluate their accomplishments with respect to the learning objectives and to what extent the methods used in the course enhanced their learning. See Figure 2.

In the feedback open responses, the participants especially valued the interdisciplinary work and the practical approach.

"The practical approach and the connection to real working life was really rewarding."

"The seminars were excellent and the cooperation with various disciplines interesting. It was really thought-provoking to discuss and exchange ideas with my own microteam. It was illuminating to read the other team members' diaries, to see how we observed things differently during the home visits."

The inspiring atmosphere was praised in several responses.

"The atmosphere was extremely warm and supportive, which is not my experience of other courses."

"Alongside my medical studies it was wonderful to challenge myself in a different context: we could strive for our own creativity, brainstorm, and especially listen to the totally different perspectives of other disciplines."

The participants highly valued the fact that several executives of older people's care were present at the final seminar to listen to the innovation presentations. The students even suggested that the media should also have been present to listen to their ideas. However, the participants were concerned about whether their innovations would be implemented. They therefore suggested that an advanced course should take place in order to refine and develop their ideas with the executives.

"It felt as if I could really have an effect on home care and play a part in change (at both micro and macrolevel!). We dealt with and reflected on humanity, dignity, engagement, and a better life in a magnificent way - I wish there were more courses like this!"

The only criticisms concerned the timetable problems because the home visits had to be performed within two weeks. Several participants suggested a longer course and more seminars.

Discussion

To our knowledge, this is the first report on an interdisciplinary team course which includes disciplines other than health care professionals. The course succeeded beyond expectations. The participants gained insights into team working, they learned about patient-centeredness and they created fine and practical innovations for the improvement of older people's wellbeing and home care processes.

What made the course successful? In Saarinen's opening seminar, the atmosphere was extraordinarily intimate, psychologically secure, and it demonstrated an appreciation of human

benevolence. The main message of the seminar was the dignity of human beings: we are all the same, whether old or young, nurse or doctor, artist or engineer. The participants learned to listen and to be open and receptive to diversity (Saarinen & Lehti, 2014). In randomized, controlled trials mindfulness has been shown to alleviate symptoms of chronic diseases, to enhance empathy in medical students and to decrease stress and medical errors (Ludwig & Kabat-Zinn, 2008). In this approving and accepting atmosphere, the participants promptly started trusting each other and were then able to create tight microteams that functioned well. The students valued the home nurses in their teams which in turn empowered the nurses to freely introduce their points of view. The members of the microteams encouraged each other to bring up innovative ideas.

According to various reviews and guidelines (Hall & Weaver, 2001, Hammick et al., 2009), it is claimed that a common focus and aim, the implementation of andragogy (Knowles, 1990) and reflective learning theories (e.g. Kolb, 1982), activating learning methods and learning together in practical contexts are essential for effective interdisciplinary team learning. During this course there was a clear focus and the common aim that the microteam members would create innovations that could enhance older people's wellbeing and streamline home care processes. The course used reflective and activating learning methods in Saarinen's seminars in particular, as well as reflective learning diaries and participant presentations and discussions in seminars (Lonka, 2013). The literature concerning team learning emphasizes open communication and psychologically secure learning situations (Thistlethwaite & Dallest, 2014). It has also been highlighted that the participants should learn to respect each other's competence and be aware that the know-how of other professionals may differ from one's own (Hammich et al. 2009, Thistlehwaite & Dallest, 2014). We tried to encourage all this in our course, with particular emphasis on the positive, respectful and engaged orientation of the participants to each other, to older people, and to themselves and, more generally, to what makes “a life worth living” (Csikszentmihalyi &

Csikszentmihalyi, 2006). Table 3 describes the prerequisites for effective interdisciplinary team learning and the ways in which our course corresponded to them.

In recent years, the 3P model (presage, process, product) has been highlighted in interdisciplinary education (Freeth & Reeves, 2004; Hammick et al., 2007). Presages for learning include the careful planning of education, the practical context of learning and teachers' pedagogical skills, such as the capacity to respect and facilitate students. In the process, it is important to use adult learning theory, encourage reflective learning and communication between learners and emphasize the authenticity of learning situations. Mutual competence, and respect for other disciplines and patients should emerge as a product of learning (Freeth & Reeves, 2004; King & Magus, 2015).

Most research in interdisciplinary education has been performed in acute medicine (King & Magus, 2015) and it usually takes place in simulated situations. It has been argued that there is a clear need for team learning in the areas of chronic diseases (Thistlethwaite, 2012), home care contexts (Solomon & Risdon, 2011) and real-life clinical situations (Hammick et al., 2009, King & Magus, 2015). This is what was implemented in the present course. The course also took advantage of "shadowing professionals", which has been claimed to enhance interdisciplinary learning (Kusnoor & Stelljes, 2016).

There were some limitations to our study. The course was voluntary which has probably enhanced the positive feedback and learning outcomes. However, it seems that most reports on interdisciplinary learning have also involved the participation of volunteers (Chakraborti et al., 2008). In the evaluation of the course and based on the reflective diaries, we were only able to evaluate learners' reasoning and reactions regarding their learning experiences and attitudes towards the other team members and older people (Hammick et al., 2007). Thus, we cannot be sure whether their attitudes and thinking preexisted the course or were actually changed during the course. Changing attitudes is one of the most difficult challenges both in gerontology (Allan & Johnson,

2009) and in interdisciplinary learning (Partnership for Health in Aging Workgroup on Interdisciplinary Team Training in Geriatrics, 2014).

The students of industrial engineering and management, architecture, information networks, collaborative and industrial design and bioinformation technology brought a clear added value to home care and interdisciplinary learning. Firstly, their know-how concerned totally different fields from health care. This meant that the microteam members had to focus carefully on each other's ideas and appreciate each other's competence. Secondly, they brought in very different perspectives on home care: technological devices, ideas from business and management, information technology, community planning - all to serve the wellbeing of older people. The innovations indicate that we should invite other professionals to network with health care professionals and introduce them to health and social care in order to create new ideas and improvements. Furthermore, this should probably happen early on in their degree program because undergraduate students tend to be more broad-minded and ready to network with other disciplines. In addition, a special emphasis should be placed upon the atmosphere of the course, in such a way that the various professionals dialogue with one another, with openness, respect and shared humanity as the key ingredients.

Conclusions

The necessity for interdisciplinary team work has been rationalized as a matter of patient safety and effective treatment outcomes (Hammick et al., 2007; Hean et al., 2012, Partnership for Health in Aging Workgroup on Interdisciplinary Team Training in Geriatrics, 2014). Health care is becoming increasingly fragmented, the models of care are changing, and we have to learn to coordinate care and take advantage of the know-how of other professions (Partnership for Health in Aging Workgroup on Interdisciplinary Team Training in Geriatrics, 2014, King & Magus, 2015). Disciplines outside health and social care may bring added value to our patient care. The course described here is an encouraging example of a practical course that enhanced learning among

various disciplines. It also produced a large number of innovations that could be developed for improvement in the care of older people.

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Legends to figures:

Figure 1. Flow chart of the development of the interdisciplinary course.

Figure 2. Students' numerical feedback on the course by Likert scale (1..5).

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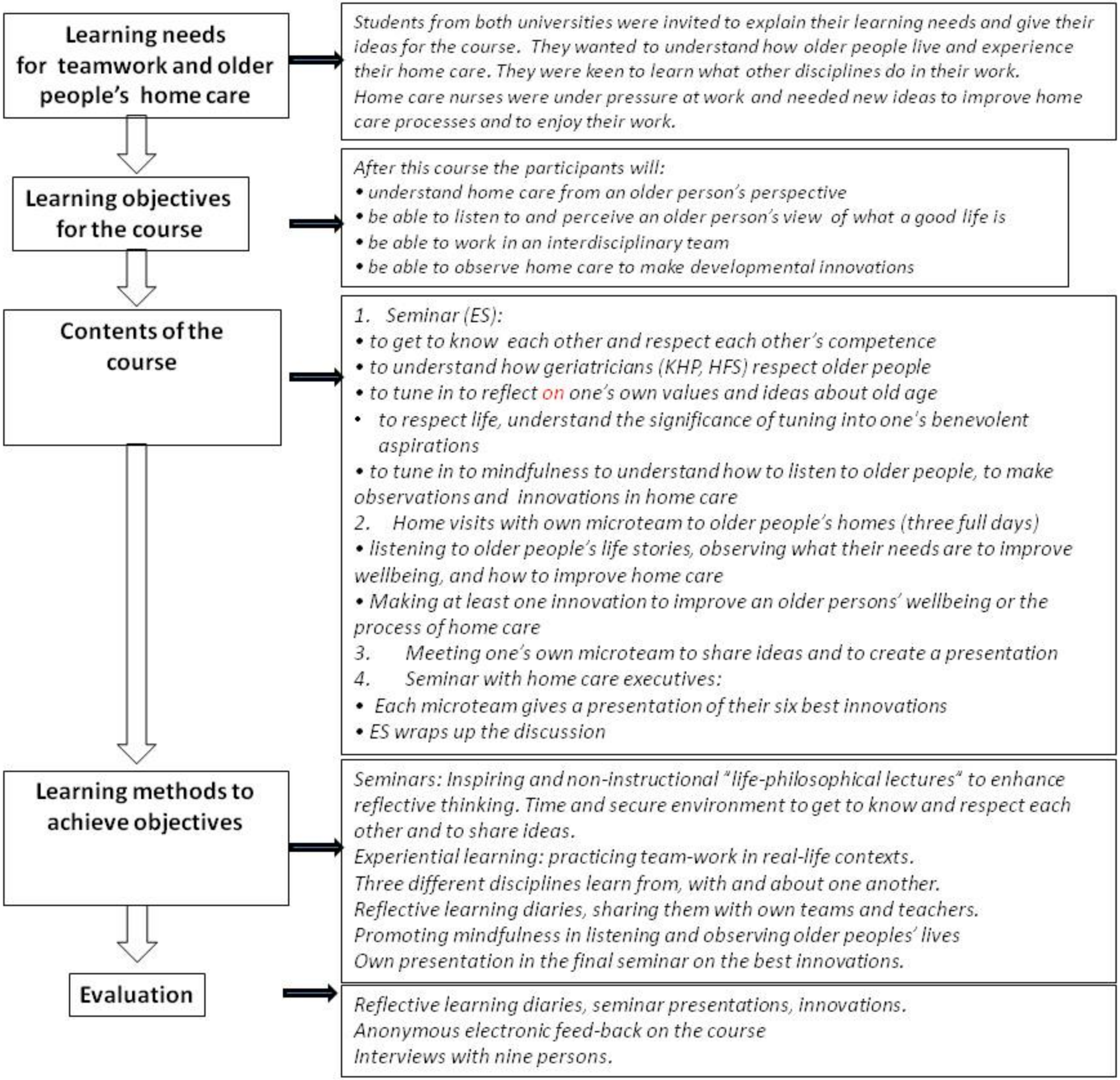
Learning needs for teamwork and older people's home care
Students from both universities were invited to explain their learning needs and give their ideas for the course. They wanted to understand how older people live and experience their home care. They were keen to learn what other disciplines do in their work.
Home care nurses were under pressure at work and needed new ideas to improve home care processes and to enjoy their work.
Learning objectives for the course
After this course the participants will:
• understand home care from an older person's perspective
• be able to listen to and perceive an older person's view of what a good life is
• be able to work in an interdisciplinary team
• be able to observe home care to make developmental innovations
Contents of the course
1. Seminar (ES):
• to get to know each other and respect each other's competence
• to understand how geriatricians (KHP, HFS) respect older people
• to tune in to reflect on one's own values and ideas about old age
• to respect life, understand the significance of tuning into one's benevolent aspirations
• to tune in to mindfulness to understand how to listen to older people, to make observations and innovations in home care
2. Home visits with own microteam to older people's homes (three full days)
• listening to older people's life stories, observing what their needs are to improve wellbeing, and how to improve home care
• Making at least one innovation to improve an older persons' wellbeing or the process of home care
3. Meeting one's own microteam to share ideas and to create a presentation
4. Seminar with home care executives:
• Each microteam gives a presentation of their six best innovations
• ES wraps up the discussion
Learning methods to achieve objectives
Seminars: Inspiring and non-instructional "life-philosophical lectures" to enhance reflective thinking. Time and secure environment to get to know and respect each other and to share ideas.
Experiential learning: practicing team-work in real-life contexts.
Three different disciplines learn from, with and about one another.
Reflective learning diaries, sharing them with own teams and teachers.
Promoting mindfulness in listening and observing older peoples' lives
Own presentation in the final seminar on the best innovations.
Evaluation
Reflective learning diaries, seminar presentations, innovations.
Anonymous electronic feed-back on the course
Interviews with nine persons.

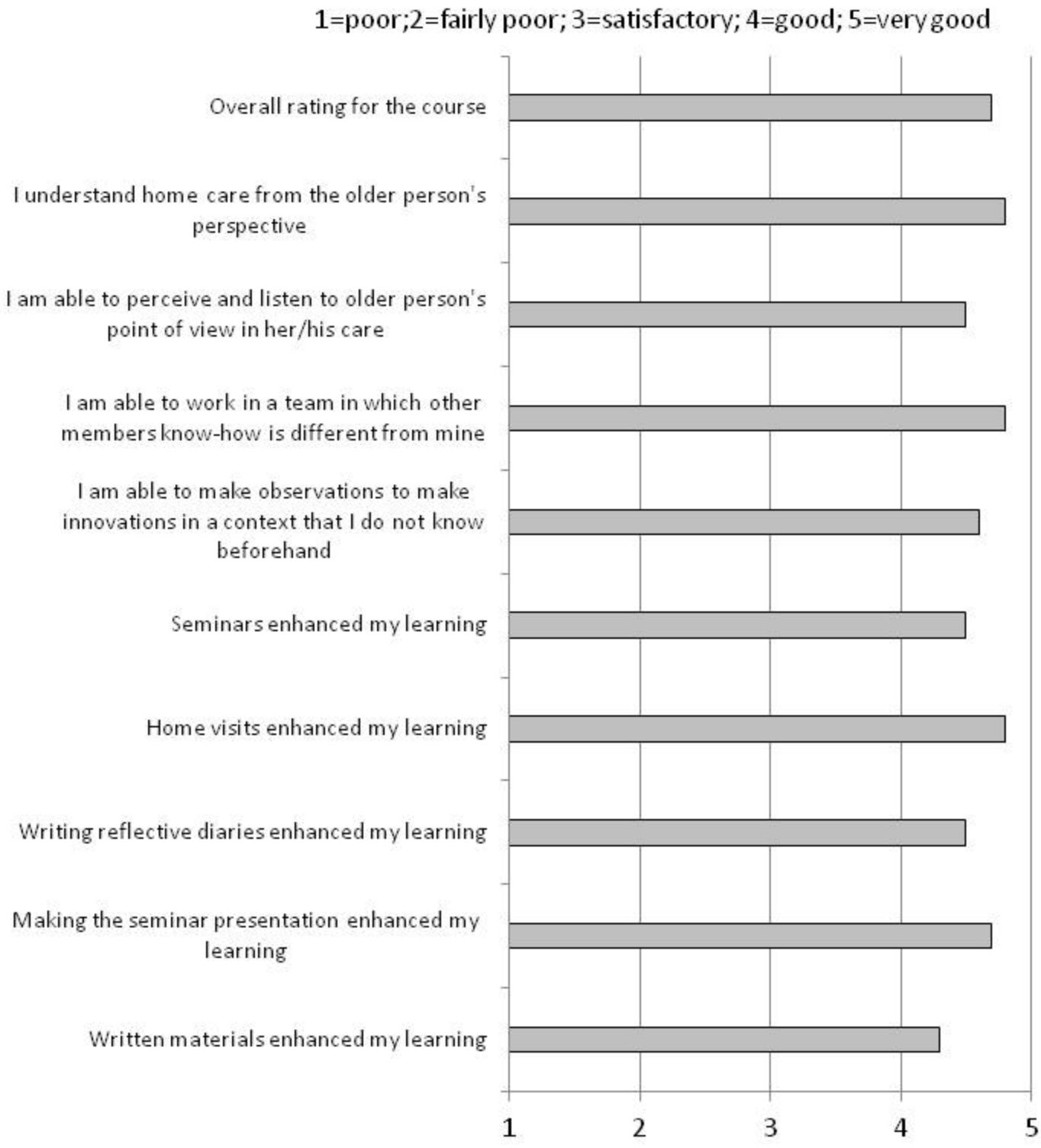
1=poor;2=fairly poor; 3=satisfactory; 4=good; 5=very good
Overall rating for the course
I understand home care from the older person's perspective
I am able to perceive and listen to older person's point of view in her/his care
I am able to work in a team in which other members know-how is different from mine
I am able to make observations to make innovations in a context that I do not know beforehand
Seminars enhanced my learning
Home visits enhanced my learning
Writing reflective diaries enhanced my learning
Making the seminar presentation enhanced my learning
Written materials enhanced my learning
1
2
3
4
5

Table 1. Principles of Saarinen's life-philosophical lecturing

* Approaching life and humanity non-instructionally with touching stories and personal experiences

* Cultivating benevolence, appreciation, connectedness, empathy and interest in others

* Providing a context for internal dialogue, mind-wandering and personal reflection

* Orientating listeners to humanly meaningful observations, insights, and associations with one's own affective experiences

* Non-argumentative and respectful questioning to enhance reflective thinking

* Inducing mindfulness to be open to novelty, alert to distinction, sensitive to different contexts, and implicitly aware of multiple perspectives.

* Encouraging positive thinking and leniency towards each other and oneself

* Cherishing human growth and what makes a life worth living

Table 2. Examples of innovations created by the microteams.

Improving older people's active agency and wellbeing	**Streamlining the processes of home care**	**Technological devices for everyday life**
Home care should make regular surveys of older patients' dreams: What is the highlight of the day? what would you like to do right now, if you were healthy? What is most valuable in life? What are the biggest everyday challenges, etc?	Nurse's notes on cell phone take too much time and make the older patient feel like a bystander. For faster recording, a portable keyboard is required.	On home care internet site should be an electronic brain-storming board in which patients, nurses and relatives could offer their ideas to improve home care. The ideas should be discussed regularly.
Hold challenge campaigns in primary schools to help older people and to launch volunteering: the classes would earn points for helping the elderly and the best class could be rewarded.	Instead of measuring time spent at older person's home, the system should measure quality of care: how does trust, appreciation, mutual respect appear in home nursing?	Abandon futile work: The ordering and distribution process of medicines takes a long time, and is prone to mistakes. The process is risky and laborious and it could be made automatic.
Secondary school students could do their practical training in home care (as hairdressers, beauticians, animal carers, musicians, house cleaners or cooks).	The nurses' time with the older person must be increased. "Family nurse" for each patient so they would not have to spend so much time getting acquainted with the patient and building trust.	Medication smartdispensers could be programmed via web. Smartdispensers and other devices can be found on internet - they should be collected into one dataset. .
Make older people get acquainted with each other in service centers: Red trays ("today I want to be alone") or green trays ("I am in the mood for chatting").	An electronic system should measure and minimize the turnover of nurses with the clients / how much older people are visited by a familiar nurse.	Virtual reality glasses could be used for older people with poor mobility: virtual concerts, places to visit etc.
"Tinder for older adults". Enabling older people to video chat using tablet computers.	"Differentiating client processes": Older patients could be profiled and accordingly create modeling processes: "short term clients", "severely ill", "mentally ill patients" (building confidence takes time, expensive patients), "cognitively impaired", "physically disabled"	Voice command devices to help older people use technology.
"Deputy-grandma" service - young people to visit older people to look at photos and to listen to stories. Older people have a lot to give. Older people could visit kindergartens.	"Cherishing Winner's Choice": home nurses should from time to time go in pairs to the field: getting support, ideas, feedback, and learning from each other. Managers should also make home visits to see the "real-life" work.	Small cranes, lifts, step stabs to help older people get out and not be prisoners in their own homes. GPS trackers for people with dementia to enable them to move about.
Opportunities for companies to brand for older people's shuttle services. In challenge campaigns, employees could win shuttle services for older people.	Smoothing home care processes with tablet computers: If "Nurse Maria" is late, the tablet at the older patient's home would inform: "Maria coming after 30 minutes". Reduces the time spent on phone calls.	"Security Guard 2.0": Integrates sensors that automatically detect different things in emergency situations: wireless emergency calls, fever, pulse sensors, oxygen saturation, glucose etc.
Tax relief for people who help older people. Shopping and outdoor company, shopping help, helping older people to go outdoors. Service vouchers for these activities.	Home care services are too limited. Many older people could afford to buy other services they wish for -> Creating a service catalog (walking club, sauna, laundry, etc). Crowdsourcing - neighbors' help.	Infoboard as a timetable in patient's home: helps her/him to orientate e.g. for shower day
Asking permission and introducing older people in the same area to each other. Making a calendar of events for the activities in the area: the city's social work, religious communities, cultural events.		Alternatives to meals-on-wheels: home nurse could sometimes order food from commercial services, restaurants, shops.

Table 3. Learning theories, methods and practices that enhance interdisciplinary learning (Clark 1996, Hammick et al. 2007, Hammick et al. 2009, Thistlethwaite 2012, Partnership for Health in Aging Workgroup on Interdisciplinary Team Training in Geriatrics 2014, King and Magus 2015,) and how they were implemented in the course "Enhancing older people's meaningful life through innovations of microteams".

Learning theories, learning methods and practices that enhance interdisciplinary learning	**Implementation**
Two or more professions learn with, from and about one another	Three people from different disciplines formed microteams
Adult learning theory (Knowles 1990) and experiential learning	Home visits, context in practical working life, reflecting on experiences and discussing them together
Authenticity, real-world context, situated learning	Home care context, visiting real home care patients. Participants collaborated in action.
Activating learning methods, use of reflection	Secure atmosphere and lively discussions in seminars, enhancing reflection with the aid of learning diaries, sharing experiences, presenting innovations to executives in the final seminar
Common focus and goal	The common focus was older people's wellbeing and the aim was to make innovations.
Patient centeredness	The course highlighted older person's candid observation and listening, to reflect on her/his point of view in the diaries and innovations
Clear roles in teams, respecting each other's know-how and special competence	The seminar strengthened respect for other people and their know-how. The team members had very different competences. Sharing learning diaries brought insights into how differently other team members observe and understand things.
Support for interdisciplinary communication and understanding	Secure atmosphere, time to get acquainted with each other and to discuss. Encouraging listening and respecting each other. Sharing diaries and experiences. Developing consensus and presenting the best innovations.
Learning about group dynamics and group working skills	Preparing the seminar presentation enhanced group working skills.