



Co-creating in International Environments—A Clinical Reasoning Course for Physiotherapy Students

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Abstract

International cooperation and collaborative teaching-learning between universities should and will be the future considering the process of globalization. This cooperation and collaboration is challenging our educational methods and it is essential to be innovative in creating new teaching-learning paths based on new technologies. This paper describes a strategic course designed in international cooperation to improve clinical reasoning at different levels. The novice levels endure the idea that a person follows a set of given rules, without any discretionary judgment or analytical situation. When the person starts organizing principles to quickly access the rules relevant to the specific task at hand, she/he is on the competent level. This is when active and analytical decision-making begins. During four academic years the purposed course has been developed and implemented in a cycle of improvement by physiotherapy students (1st to 4th year bachelor's degree) and teachers from 11 nationalities using ad hoc questionnaires and group discussion. A total of 94 people were involved in the process. In planning and implementing the course, teachers must consider selecting the proper activity based on his/her experience level, his/her different curricula and different years of studies. Feedback from questionnaires and group discussions shows that instructions and teachers' feedback must be clearly given in an online course, especially when people from different countries work together. Collaborative teaching-learning approaches with international peers are good and effective ways of giving and receiving feedback in a foreign language. Also, the multicultural approach allows mutual understanding, respecting, and coping with differences. Working in an international group with people you don't know personally prepares you to work in a globalized society.

Keywords

Higher education, clinical reasoning, physiotherapy, blended learning, internationalization

1. Context

Blended learning (BL) is a relatively new trend in higher education (Woltering et al., 2009). A wide range of BL definitions can be found in the literature (Dziuban et al., 2004; Graham, 2006; Singh & Reed, 2001). What is important

to consider is that there must be both: face-to-face and non-face-to-face learning (Kim, 2007). The non-contact time of BL offers flexibility as well as an organized schema/schedule of tasks to be considered, so there is a starting and finishing point for each task and everyone enrolled in the course can accomplish the expected learning outcomes. This is essential in international environments when working with universities from different countries (Littlejohn & Pegler, 2014). Thus, like other new strategies using online and/or high technology, BL is an opportunity to expand the number of people with whom interact with. As a result, learning content can “arrive” to a larger and more disparate audience and BL allows collaboration with people from different geographical areas (Dziuban et al., 2004; Wolterning et al., 2009). Also, the combination of face-to-face and non-face-to-face learning experiences allows teachers to move away from the traditional model, which is more passive and unidirectional, to a new model, that is more interactive and bidirectional (Singh, 2003) which supports a wider range of learning styles (Sharpe et al., 2006).

The idea of BL applied not only in one university but instead planning a standard course with two or more universities becomes a challenge considering different curricula, learning approaches and points of views at the time that preserves learning outcomes. Thus, design co-creation and transnational competencies address this potentially problematic situation (Díaz-Menendez & Gumersson, 2012). As pointed out sometimes it is difficult to be aware of the students’ voice in a way that they could contribute more compared to the traditional hierarchy of the learning process (Fielding, 1999 in Bovill et al., 2011).

The European Network of Physiotherapy in Higher Education (ENPHE) is a network that brings together and enhances collaboration between physiotherapy educational institutions in the European region. ENPHE provides an environment where the students’ voice can be heard and where teachers and students work together. Co-creation is considered a strategy that endorses the idea of opportunity (Bovill et al., 2011; Tong et al., 2018). Co-creation has to be seen as an appropriate situation to transform higher education culture by approaching perspectives and connecting the strength of the relationship between the main actors, learners and teachers, working together. Collaborative work is essential to co-creation to finish a high-quality educational product (Akhilesh, 2017). Different authors pointed out that co-creation aims at improving a product or an output with all the parties involved in the process (Prahald & Ramaswamy, 2004; Gnaur & Larsen-Nielsen, 2017). A wide range of experiences in the literature concerning co-creation with good results can be found. (Mercer-Mapstone et al., 2017).

A broad meaning of co-creation is used, encompassing practices that also relate to meaningful learning and language for the final users of the product, students all over Europe. Their contributions add valuable input for improving and developing educational products (Bergmark & Westman, 2016; Tong et al., 2018; Dunne & Zandstra, 2011). Co-creating with students implies taking a major and active role so they will become responsible for their process of learning (Bovill et al., 2011; Cook-Sather & Alter, 2011). As Tong (2018) pointed out this partnership between teachers and students could seem somewhat naive but it changes radically our way of understanding higher education to be more aligned with 21st century education goals (Scott, 2015). However, it is also true that this requires a radical change in the way teachers perform their teaching as well as how students are involved in the process (Littlejohn & Pegler, 2014; Kandiko Howson & Weller, 2016). In March 2015, ENPHE started a co-creation process for a course called BleClirc, a mix of Blended Learning and Clinical Reasoning (CR).

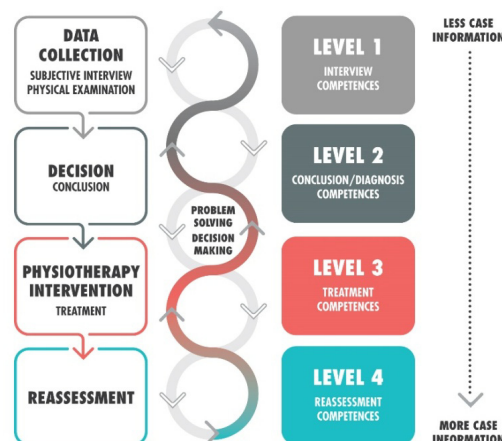


Figure 1. BleClirc underlying structure linked with clinical reasoning process.

CR is a cornerstone in most of the healthcare professions (Higgs & Jones, 2018). It is understood as a process that could be divided into: (L1) interview or gathering information; (L2) conclusion; (L3) treatment. Those three parts are created to determine course levels (see Figure 1) where a fourth level can be added (L4). The latter level aim is to cover primary prevention and health promotion. Each level could be linked to a certain level of competence acquisition, depending on the evolution of the curricula.

BleClirc course was created to be used by all members of ENPHE based on creative commons privacy policy aiming to stimulate clinical reasoning among Bachelor physiotherapy students in an international environment. This paper describes the process of co-creation considering ENPHE philosophy, its structure and working methods and seminar meeting once per year. All these points allow this co-creation between students and teachers adding international value to all of it.

2. Methodology

2.1 BleClirc co-creation process

Between March 2015 and June 2018, different steps were taken to develop the course. In March 2015, during the Spring Seminar held by ENPHE, the initial idea of creating a course on clinical reasoning was produced. In January 2016, three universities collaborated on the project: Ghent University (UG) Belgium, Satakunta University of Applied Sciences (SAMK) Finland, and University of Vic – Central Catalonia University (UVic-UCC) Spain. The co-creation started in April 2016 during ENPHE spring seminar and ended on April 2018 (see Figure 2). A total of 94 people were involved in the process. The principal authors were present in each study. Students were from bachelor's degrees and different years of study. The common language used was English, and there were people from 11 nationalities. Each study used group discussion and bespoke questionnaires to gather information concerning satisfaction and the ongoing co-creation process.

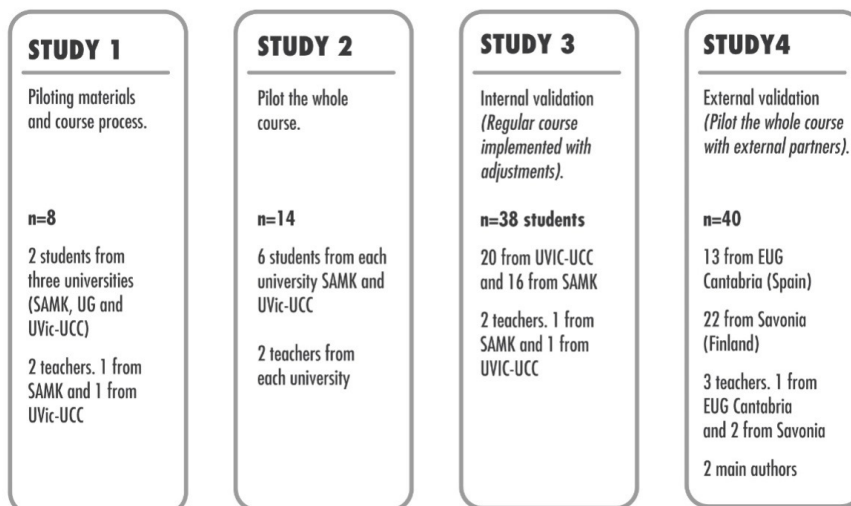


Figure 2. Co-creation process.

2.2 Study 1—Developing the content of the course

During the spring seminar held by ENPHE a draft of the materials were prepared by main authors. Two students from each collaborating university (SAMK, UG, UVic-UCC) were recruited one month before the seminar to participate voluntarily on the project. Students were treated as consultants and co-developers to undertake the following activities:

- Go through all materials.
- Ask for possible questions regarding unclear information.
- Simulate one of the tasks of the course.
- Develop and record an introductory video for the course.

In all those activities' students were asked to look both at the content and the language, so it could be adapted to

maximize a better comprehension of what is expected from them to get the learning outcomes.

2.3 Study 2—Piloting co-created materials

During autumn 2016 the course was ready to be developed with all the materials finished in study one to pilot them. Study 2 aimed to test the whole process in a realistic way i.e. working with an international peer/partner in an online environment.

Four new students from each university were recruited to participate voluntarily on the project. Additionally, the same students participating in study 1 were included to provide continuity in the co-creation process.

Students were treated as potential users of the course first and as consultants and co-developers to undertake the following activities:

- Go through the course and complete all the assignments.
- Ask for possible questions regarding unclear information.
- Give ideas for improving communication with their international partner and provide information concerning communication platforms.

The principal authors, and teachers during this study 2, acted as teachers, which mean having contact with students at the agreed moments, solving questions when needed, and giving feedback on the tasks. After finishing the BleClirc course, a bespoke questionnaire was created to explore the satisfaction and ways to improve the course (Gonzalez-Caminal & Kangasperko, 2017).

2.4 Study 3—Internal validation of the course

Study 3 aimed to reproduce the course with a realistic sample of new students from two home universities (SAMK and UVic-UCC). It intended to perform the course in the regular way after collecting and analyzing information of the questionnaire developed during Study 2 and after making some minor adjustments to the materials. No co-creation took place during this internal validation study. Nevertheless, students were requested at the very end to answer a questionnaire giving the opportunity to add valuable information. Twenty students from UVic-UCC (Spain) and sixteen students from 1st year from SAMK (Finland) participated in the project. UVic-UCC students were voluntarily participating in the course. SAMK students were asked to participate in the course voluntarily as a part of a regular course.

2.5 Study 4. External validation with new partners

During Spring 2018, an external validation of the course was performed. The aim was to disseminate the course—background philosophy content and materials—with new partners unrelated to the project. All materials were facilitated to the new partners so they could contribute in all the contents, giving insight from the perspective of someone doing the course for the first time. Two Skype for Business meetings were organized to support the new participants before starting the course and during the course. Thirteen students from 1st bachelor year from Escoles Universitaries Gimbernat-Cantabria (EUG-Cantabria) in Spain were asked to participate voluntarily. Twenty-two students from 1st bachelor year from Savonia University of Applied Sciences in Finland participated in the course as part of elective work to be done during their curricula. After finishing the course, a teachers' meeting was convened to discuss the whole process. Some minor adjustments of the materials were completed following the partners feedback.

3. Results

Along this co-creation process 94 people have participated reviewing and rewriting contents and materials of the BleClirc course. A total of 14 documents were reviewed and finished including: course description, assessment templates, feedback templates, activities templates and 6 case studies were created. All the documents are now finished for L1 and L2; L3 have all materials completed and it has to be still implemented expected in Spring 2020.

Concerning implementation of the course, the whole process of L1 was done by six universities from four countries. L2 was done by three universities from two countries involved in L1 and two new universities from two countries. In all the cases, with great acceptance both by the students and the teachers. BleClirc course is now ready to be distributed among ENPHE members through the website.

Outcomes from group discussions allow to say that co-creation process between ENPHE members was an enriching experience. Some of the student's comments related to co-create with teachers were *"now I see how teachers develop materials and ideas"*; *"it is not easy to consider the whole situation"* or allow them to have a *"clear understanding of my competences and boundaries as a therapist"*.

Students have the perception that some time teachers do not realize about clear understanding *"that's teachers talk*

[...] *these competences doesn't mean anything to us*"; *"the way you sometimes write don't allow us to know what is needed to be done"*. When considering working with students these experiences were *"enriching by seeing how organized and efficient students can be and how they can help building meaningful materials for them"*.

Internationalization is one of the other outcomes related with this experience. Students found similarities and differences when working in this international environment of the course: *"we differed in our approach to the interview: one friendly, one more formal. Similarities were that we all covered areas of physical function, social and psychological well-being of the client"*. But overall they were satisfied with the experience: *"the only chance to discover different approaches and scopes when dealing with patients from distant backgrounds to mine is to practice with people from other countries and cultures"*; *"it has been interesting to work with people from other places to see and realize how I work"* or *"working with students from 1st semester allows me to realize how much I have improve since I started studying"*.

This experience has shown to be an excellent way to implement internationalization programs both, at home and abroad, and to allow students to work together with others.

4. Discussion and conclusions

Co-creation is an appropriate methodology of designing new courses, especially when people from different countries are the final target users. This is relevant when the common language is not the user's mother tongue or current language. Considering this, co-creative design, including students and teachers, suggests that international BL experiences are relevant strategies when geography is a challenge (Bergmark, 2016). Therefore, practices of internationalization from home could be done. Additionally, co-creation is an exciting strategy that adds valuable outputs when the final product to develop include people who are not in the same place and that does not share the same curricula. Co-creation is a valued and innovative way of designing courses at allows to have a good validation of assessment tools. At the same time, using BL as a strategy for this course is suitable with those who need certain amount of flexibility when learning (eg. Students who work or students who have relatives in charge) (Singh, 2003; Okaza, 2015).

Furthermore, when working with students from different years, there is a need to define what is clearly expected from each one of them. This makes it possible to achieve the desired competences; even if one of the levels is more suitable for a particular year student, it is also true that students from different years can review or improve the known competences. It is well known/recognized that being involved in teaching and/or helping other students to deepen on a topic increases knowledge more effectively than other forms of learning (Ausubel, 1968). Then, students from different years can benefit from the contact with other years' students at home or abroad.

BL with its non-contact dimension, include the notion of ICT (information and communications technology) and mobile devices. Both are a tangible reality for all levels of society and education nowadays. ICT in education should be developed on a pioneering element of innovation. This reaffirms the idea that learning occurs both in formal settings, in the classroom, and in informal places, outside the classroom. Given the current situation, it is easier today to bring student together in search of a common goal even though they are from different countries.

Collaborative work with international peers is a good and effective way of giving and receiving feedback in a foreign language. Also, such as multicultural approach allows to understand, respect and cope with differences. At the end of the course students agreed in improved interview competencies and learnt issues about coping with feedback from others. Considering world current situation, this international working-group environment with people you don't know personally prepares you to develop in a globalized society (Scott, 2015).

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Declarations

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Availability of data and material: ENPHE website

Code availability: No software or custom code was used.

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