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Exploring the utility of in-depth student feedback for improving case-based learning: an interview-based pilot study in work and organizational psychology

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Abstract

This qualitative pilot study aims to explore the utility of in-depth student feedback, which I define as a qualitative approach to collecting student reflections about their learning experiences, as a tool for assessing and improving effectiveness in the use of case-based learning (CBL). I conducted three semi-structured interviews with students attending a Master level Seminar in Work and Organizational Psychology I taught in the Spring term 2015, dealing with the topic of Occupational Health Intervention. I asked the students to provide reflections about their learning experiences with regard to four selected elements of learning relevant to CBL, i.e., inductive learning potential, group work, role playing, and formative feedback. The results pointed to a number of gaps in the way I designed and implemented CBL, which can be used, in accordance with the paradigm of transformative reflection (Biggs & Tank, 2006), as starting point to enhance student learning experiences toward a better achievement of the course intended learning outcomes. Using my Seminar as illustration, I described how the framework of action research (Kember & Kelly, 1993) may guide teachers in making use of the feedback received to revise their teaching and learning activities. I finally suggested four points, among others, that teachers might want to consider if they aim to use in-depth student feedback as a means to improve their teaching practice.

INTRODUCTION

In the web-site of the Harvard Business School's Christensen Center for Teaching & Learning, the incipit of the page covering case-based learning (CBL) reads: "To create leaders, Harvard Business School creates the context in which leaders are formed: real-life challenges, wrapped in complicated and sometimes insufficient information. Each challenge confronts our students with a rich web of consequences - and a demand for a prompt, responsible plan of action." (http://www.hbs.edu/teaching/inside-hbs/; accessed on April 16). Although my Master level Seminar in Work and Organizational Psychology at the University of Copenhagen is not about creating leaders, this quote well illustrates why I have chosen CBL as main teaching tool for reaching the course general intended learning outcomes (ILO), i.e., the development among students of functioning knowledge as occupational psychologists in the field of occupational health intervention (OHI). As in many other professional areas, OHI implies constantly grappling with work organizations where uncertainty, limited resources and incomplete information are commonplace. This requires educating OHI professionals that are able to apply evidence-based methods and procedures while adapting them to the specific features of the targeted work organizations; this should be combined with skills in communicating effectively with organizational stakeholders and the ability to operate effectively as a member of a team. CBL seems to be a suitable instructional method to assist Psychology students in developing these skills. Through the analysis of complex authentic cases, students are in fact prompted to work in group and develop critical reasoning skills in the effort to solve the emerging problems. In addition, they may experience the implications of taking different perspectives while approaching the case, in this way learning how to effectively communicate with the different actors involved in the process.

This said, as with any other type of teaching and learning activity (TLA), CBL will be effective only provided that it is designed and conducted so that learning is experienced by students in the intended way. Guided by the paradigm of transformative reflection in teaching (Biggs & Tang, 2011), in the present qualitative pilot study I aimed to explore the utility of in-depth student feedback as a tool for assessing and improving effectiveness in the use of CBL activities while teaching the topic of OHI. I collected this type of feedback by means of three semi-structured interviews with students attending a Seminar I taught in the Spring term of 2015, involving CBL as main teaching method. I focused specifically on four selected elements of learning relevant to CBL, i.e., inductive learning potential, group work, role playing, and formative feedback. While analysing the interviews, I sought to identify core

learning experiences that students reported in relation to these four elements, paying especial attention to problematic aspects that could be addressed in an attempt to improve future courses. Based on the results of this study and the ensuing reflections, I suggested four points that teachers might consider when planning to collect in-depth student feedback. Finally, taking my course as example, I briefly described how the action research paradigm (Kember & Kelly, 1993) might be usefully adopted as guide to harness the results of in-depth student feedback for improving teaching quality.

Case-Based Learning in Occupational Health Intervention

Organizational-level Occupational Health Intervention (OHI) can be defined as "planned, behavioural, theory-based actions to remove or modify the causes of job stress (stressors) at work aiming to improve the health and well-being of participants" (Nielsen, Randall, Holten, & Rial González, 2010). In recent years, the interest in OHI gained momentum all over Europe since national regulations have been established mandating work organizations to take action to protect employees from the risk of work-related stress. To fulfil this obligation, in many European countries, including Denmark, employers are allowed to either use expertise coming from internal resources, if any, or rely on external consultants with specific expertise in the field of OHI. Whether operating as internal or external experts, occupational psychologists are the professionals providing the highest level of knowledge and skills to assist work organizations in implementing effective OHI plans. This makes working as occupational psychologist in the field of OHI an attractive career option for psychologists that are about to enter the job market.

Academic education is of course a first but crucial step toward supporting a high degree of competitiveness of psychologists as practitioners in the area of OHI. Therefore, the ILOs of a Master level course on the OHI topic should point to the development of those skills that are needed to successfully operate in this professional field. A course TLAs should be then aligned accordingly so that students are involved in activities enabling them to enact verbs encapsulating higher-order thinking such as "apply", "design", "plan", "implement", "invent", "evaluate" and "solve problems" (Biggs & Tang, 2011). Enacting these verbs reflect performances of understanding that underlie the development of functioning knowledge, i.e., the type of knowledge required to build competent decision-making in professional contexts. Among available teaching techniques, CBL seems to be among the most suitable for developing functioning knowledge. Specifically, CBL can be defined as a teaching activity

where students are required to apply theories and methods to analyse and take informed decisions about a case reflecting real professional challenges (Krogh, Stentoft, Emmersen, & Musaeus, 2015). By scrutinizing complex authentic cases, students may "become aware of the kinds of situations and dilemmas they might have to face as professionals, gain both theoretical and practical understanding of their subjects, develop critical reasoning skills, explore their existing preconceptions, beliefs, and patterns of thinking, and make necessary modifications in those preconceptions, beliefs, and patterns to accommodate the realities of the cases" (Prince &Felder, 2006; p. 132). In the field of OHI, working with cases mirroring real-life scenarios (i.e., work organizations) is crucial to the development of the skills required in order to operate proficiently as occupational psychologist in OHI, which entails possessing sound problem-solving abilities while designing and implementing tailored plans of action in typically fluid and resource-limited contexts such as work organizations. This means combining solid technical expertise with flexibility in adapting methods and procedures to the specific features and resources of the examined organization. It also implies effective functioning in teamwork and possessing good communication skills to successfully interact with different organization stakeholders (e.g., employers and managers).

Using transformative reflection to improve teaching quality: the role of in-depth student feedback

Not unexpectedly, the mere fact of using CBL as teaching technique in the context of OHI is not *per se* guarantee that the course ILOs will be achieved. As with any other TLAs, using CBL will be conducive to effective learning if the related activities are designed and carried out so that students are activated in the right way and learning occurs as intended. In parallel with the Teaching and Learning in Higher Education course I attended at the University of Copenhagen in 2014- 2015, during the last two semesters I thus engaged into a systematic process of reflection on the effectiveness of my teaching practice, focusing particularly on CBL, being this teaching method especially suitable for achieving the ILOs of a course dealing with OHI. As guide during this process, I relied on the paradigm of transformative reflection (Biggs & Tang, 2011), an approach whereby teaching is conceived as a continuously evolving activity where different sources of feedback may serve as tools for enhancing quality of teaching. Among these, student feedback may prove particularly useful to identify potential issues in one's teaching practice that may prevent learning from occurring as intended (Dunkin & Precians, 1992). In particular, in-depth student feedback, which I define as a qualitative approach to collecting student reflections about their learning experiences, may

enable a teacher to gain insight at levels of detail which might difficult to obtain with other forms of student feedback such as course mid-term and final evaluations carried out through fixed-response questionnaires. Supporting the role of qualitative student feedback as a tool for improving teaching quality, Dunkin & Precians (1992) found that the practice of collecting and using student feedback was substantially more prevalent among award-winning than novice University teachers.

Viewed from the perspective of constructive alignment (Biggs & Tang, 2011), obtaining in-depth student feedback involves assessing whether the TLAs realized did succeed in inducing the kind of learning experiences that should be activated in order to achieve the course ILOs. To assess whether, and to what extent, these learning experiences occurred as intended during my course, in this study I focused on four selected elements which may be considered particularly relevant to the effectiveness of CBL, i.e., inductive learning potential, group work, role playing, and formative feedback. In the following section, I will introduce each of these elements and provide justifications for why I deemed the TLAs realized to be appropriate for inducing the desired learning experiences among students. Box 1 describes course structure and ILOs, and provides details of the CBL activities carried out during the course (it is recommended to read this Box for a better understanding of what follows).

Box 1. Course description

The Seminar, entitled "Employees' Personality, the Psychosocial Work Environment, and Organizational Behaviours", was taught by me and another Associate Professor in the Spring term 2015 as part of the Master level course in Work and Organizational Psychology at the University of Copenhagen (5 ECTS). Since the Seminar was offered to both Danish and foreign students, it was entirely taught in English. In all, the Seminar consisted of nine classes of 3 hours each. The first class was an introduction to the course structure and contents, and comprised a section where the teachers and the students presented themselves. The following eight classes were equally divided between me and the co-teacher. In all, 16 students have signed up for the Seminar, although only about 12 students did actually attend all or some of the classes. Regarding my course part, approximately 10 students could be considered as regular attendees (including five students from the University of Copenhagen, two exchange students and three foreign students).

Regarding the four classes I taught, the course ILOs were the following:

1. Designing research-based OHI plan proposals tailored to the specific characteristics of real work organizations, taking both content and process elements into account.
2. Developing skills as occupational psychologist (mostly as external consultant) in the OHI field, by: a) enhancing the ability to communicate effectively with employers and managers when presenting and negotiating OHI plans and b) improving the ability to work in team when developing OHI plan proposals.

All over the course I used CBL activities where students were invited to work on hypothetical organizational cases and prepare OHI plan proposals for each of them. While doing this, students were faced with the challenges of both adapting the phases of the OHI process to the

specific characteristics of the targeted organizations and of applying scientifically validated OHI models in real situations. Two different cases were used:

1. The first consisted of a multinational call-centre company in the telecommunication sector inspired by a real organization I dealt with in the past as OHI consultant. Before the class involving this case-based study, I uploaded on Absalon a detailed description of the company along with the class assignment (see Appendix A). In class, before asking the students to work on the case, I gave a lecture describing in detail all the OHI assessment phases and the possible actions that could be implemented within each of these. I then asked the students to form two groups of about five members each and elaborate an OHI plan proposal tailored to the call-centre case provided, focusing on the assessment part only. The proposal should be illustrated using up to five Power Point slides and presented to the other group of students. During the presentation, the presenting and listening group were requested to act, in a role playing scenario, as consultants and employer/managers, respectively (note that each group had to act both roles). The listening group was then invited to ask questions both during and immediately after the presentation, and also to prepare two further questions to be uploaded on Absalon. The questions had to address potential weaknesses in the presentation heard. At the end of the course, i.e., after the second case was completely worked out by the students (see point below), each group had to go back to the Power Point slides and revise them while also addressing the questions uploaded on Absalon. Each group was also requested to complete the OHI plan proposal by adding another (up to) five Power Point slides covering the management part of the OHI process. As final assignment in class, each group had to present the complete OHI plan proposal to the other group, using the same role playing approach described before.
2. In the second CBL activity the focus was on the management part of the OHI process. This case differed from the first one in two respects. First, I did not give the students any lecture before they began working on the case. Second, the case was self-constructed by the students themselves. As with the previous case, I asked them to form groups of five (but different from the ones that worked on the first case) and choose an organization known by one of the students from each group, possibly out of personal work experience. I invited each group to provide a description of the chosen organization focusing on the information that in their view would be the most relevant to know for the purpose of preparing the OHI plan proposal. Then I asked each group to write down, using flip-chart sheets, a proposal detailing the OHI management phases. Each group was also invited to prepare three points they would like to receive feedback on from the other group. In the same role playing scenario used before, every group had to act as consultants while presenting the planned management phases to the other group, while the latter was invited to take on the role of employer/managers. Once all the presentations were delivered, each listening group was asked to provide structured feedback (in class) on the three feedback points prepared by the presenting group, followed by a plenum discussion in class.

The final exam consisted of a written 6-page synopsis on a topic of relevance within the course curriculum and an oral part focusing mainly on the synopsis theme. In an attempt to improve alignment of the final Assessment Task (note that before the recent Education Reform the synopsis was an institutional examination form at the Department of Psychology) with the course ILOs and TLAs, during the final exam I asked students to sketch a potential OHI plan proposal tackling the specific problem they addressed in their synopsis.

Inductive learning potential

Inductive learning indicates a learning process whereby students are stimulated to infer general theories and methods through the analysis of a particular problem (e.g., a case). By contrast, deductive learning entails testing previously presented theories and methods by

applying them to particular situations. The potential benefit of using inductive methods of teaching is that being confronted with a concrete situation tends to prompt students to "generate a need for facts, rules, procedures, and guiding principles" (Prince & Felder, 2006; p. 123). In the context of CBL, after having savoured the concreteness and complexity of a given real situation, students are likely to feel more committed to making use of evidence-based theories and procedures to generate informed decisions on the emergent problems. This is line with constructivist theory (Prince &Felder, 2006), which conceives learning as occurring more likely when what has to be learnt is connected with events or situations students are, or get, familiar with. For instance, an important ILO in OHI is that students develop skills in designing an intervention plan where scientifically validated theoretical approaches and procedures are adapted to the specific features of the targeted organization. While doing this, students will engage in a learning process where the motivation of effectively handling a particular meaningful situation leads them to generate a need for using problem-solving strategies supported by scientifically validated theories and procedures. To illustrate, in OHI an established notion, deriving from participatory action theory (Nielsen, Stage, Brauer, & Abildgaard, 2013), is that an intervention will succeed only if employees' participation and engagement are ensured across all phases of the OHI process. When students engage into the design of a OHI plan for a particular case, they become aware of the importance of actions promoting employees' participation to ensure a successful OHI process. In this way, the theory of participatory action will be translated to practice in a meaningful way and thus learnt.

According to Prince & Felder (2006), the extent to which a CBL activity may be considered as more or less inductive rests on the way it is implemented. Before they start working on a given case, students must be equipped with *a-priori* knowledge of the main concepts, theories and procedures available to tackle the specific problems the case aims to illustrate. However, a teacher can increase or decrease the inductive learning potential of CBL by modulating the extent he/she provides the students, before the case is presented, with elaborations on these theories and procedures, and supplies them with illustrations of the challenges arising when trying to translate these into practice. A teacher's decision about the right extent to which such elaborations should be given beforehand might be contingent on factors such as the general level of the students attending a course. For instance, a low level of knowledge structure may lead an inexperienced class to derail and use theories and procedures inappropriately or not use them altogether, while instead relying on naïve approaches to the case provided.

During my Seminar, I used two different approaches to case-based study (as described in Box 1) to explore how students experience activities designed to induce different levels of inductive learning. In the first learning situation, before students started to design the OHI plan proposal for the case provided, I gave them a lecture with elaborations on how the use of established theories and procedures may support OHI effectiveness, while also showing examples of possible actions that could be implemented within each phase of the OHI assessment. By contrast, in the second learning situation I did not give students any prior lecture providing such elaborations and examples. The two CBL activities thus differed in terms of the degree theories and procedures were elaborated on and contextualized before the students started to work on the case. The underlying hypothesis was that running a CBL activity according to the second approach would make learning more inductive; at the same time, however, the lower level of knowledge structure provided in the second teaching situation could be risky in that students may lack sufficient connections between known theories and procedures and particular real-life scenarios, leading them to engage into non-scientific approaches to the cases provided. In-depth student feedback may help elucidating the learning processes activated by these two different approaches to CBL and identifying potential obstacles to learning associated with both.

Group work

CBL extensively relies on group work to achieve its learning outcomes. In line with this, in my Seminar class students were required to work on the cases presented in small groups of 4/5 persons. According to Biggs & Tank (2006), learning interactions between students in small groups may be associated with a host of desirable outcomes. These include, for instance, the elaboration of new content through the circulation among peers of different interpretations and approaches to the same problem. Group work may also help students shaping standards for judging the quality of interpretations and approaches through reflections on how valid are the argumentations provided by the other peers. A further core benefit of working in groups is the development of a student capacity to operate in team-based settings. This is a crucial learning outcome for the development of functioning knowledge, since in most professional areas decisions are typically taken in teams. In the context of OHI, collaboration in teams may basically occur in two ways: a) between fellow occupational psychologists, as OHI projects usually involve a consultancy team, mostly when organizations are sizeable; b) between occupational psychologists and actors within the targeted organization (e.g., the employers, managers, occupational health representatives,

employees, etc.) that are involved in the decision-making concerning the OHI plan to be implemented.

However, in CBL, as in other TLAs making use of groups, the effectiveness of group work as method for achieving the ILOs relies on the quality itself of the groups that are formed. Quality levels depend on various factors among which group mix and the level of engagement of and contribution of group members are key. When imbalances occur in the extent students in a group are engaged and contribute, there might be substantial gaps in the effective circulation of opinions/experiences, thus jeopardizing the above-mentioned benefits of group work. Students might be seen a unique source of information when it comes to understanding how groups function and the dynamics within, helping the identification of gaps that need to be addressed for improving the impact of group work on learning.

Role playing

Role playing is a method of simulation that can be useful to learn communication skills in various fields, including professional contexts (Baile & Blatner, 2014). Bartle (2004) defines role playing as "a training session where the facilitator, perhaps with an assistant or two, sets up a scenario where the participants are assigned different roles, where those roles identify with those in the situation where participants will find themselves when they undertake their work in the field. The play gives the training participants opportunities to act out various roles chosen to represent actual roles that would be in the field situation". The integration of role playing techniques into CBL seems particularly appropriate in my course, since students, by enacting salient roles, can realize in a more direct way the importance of negotiation in the context of OHI. In particular, they may become more easily aware of why possessing good communication skills may make a difference when the purpose is that one's approach is endorsed by the other parties sitting at the negotiating table.

To implement role playing into the CBL activities, as described in Box 1 I asked students to play the roles of two of the main actors involved in the OHI process, mostly in the initial stages where the negotiation is about the way the OHI plan should be designed: a) the occupational psychologist who has to propose an OHI plan to the organization, especially to the employer and the managers; b) the employers and managers that have to evaluate the quality and feasibility of the proposed OHI plan. The dynamic of the this relationship revolves around the search of a balance between two basic needs, i.e.: a) the need for the

consultant to guarantee that all the phases of the OHI process are adequately implemented (e.g., a screening of the psychosocial work environment that involves a representative sample of the employees, evaluation of process and content outcomes during OHI implementation, etc.); b) the need for employers and managers to limit the amount of financial and organizational resources to invest in the OHI process (e.g., guaranteeing that the time spent by employees in the OHI phases does clash with routine work practices). With specific regard to the occupational psychologist that presents the plan, possessing sound abilities in communicating the chosen approach is key. This means both being able to show the benefit of investing resources and efforts into the process and to provide convincing answers to the many questions that employers and managers tend to ask to the consultant during and/or after the OHI proposal has been presented. The development of such communication skills becomes more and more important nowadays in a market where the offer of consultancy services in the field of OHI is growing at an unprecedented fast pace. Through student feedback it might be possible to illuminate whether role playing, as it was integrated into the CBL activities, was effective in developing among students those communication skills that are useful to support an occupational psychologist's competitiveness in the OHI negotiation process.

Formative feedback

In higher education, formative feedback is a type of assessment made in the course of the learning process (Biggs & Tang, 2011). Its aim is providing teachers and students with evidence on how learning is going on and what is takes to improve it. By contrast, summative feedback (or assessment) occurs when learning has already taken place, and only informs the teacher on whether learning has happened or not (e.g., during final course exams). From a teacher's perspective, formative feedback is a useful tool to identify any major gap in student learning (e.g., misconceptions about a theory or a methodological approach). According to recent conceptions, however, formative feedback should in the first place be directed to the development of self-regulated learning skills in students (Nicol & MacFarlane-Dick, 2006). That is, through formative feedback activities students should learn how to learn and how to improve their learning, the final purpose being that these become permanent tools in a person's professional toolbox (life-long learning). Accordingly, formative feedback activities should be designed so that students increase their awareness about what is good learning and how to regulate their learning in order to fill the existing gaps.

With the specific purpose of supporting self-regulated learning among students, during the Seminar I implemented two peer formative feedback activities – as described in Box 1 - where students were invited to evaluate their own performance against quality standards set by themselves. In relation to the first activity, where each group of students had to provide feedback on the other group's presentation and prepare questions focusing on the weakest elements in it, the expected benefit was two-fold. First, while answering the questions posed regarding their own presentations, students had the opportunity to reflect on their own gaps in learning and try to fill them. Second, while preparing questions to the others' presentations, students were stimulated to self-regulate their learning since they had to decide themselves which were the quality standards to rely upon while evaluating the others' performance. In the second formative feedback activity, where I asked each group to prepare and present an OHI plan proposal on a different case and then list three aspects of it that the other group should provide feedback on, students were again stimulated, both when asking for and providing feedback, to reflect on the quality of their learning by evaluating their proposal vis-à-vis established quality standards in OHI planning. During and at the end of both peer formative feedback activities, I used to step in to redirect feedback when this was incorrect or incomplete. I collected in-depth student feedback on their experiences with the mentioned formative feedback activities to elucidate whether the latter were effective in making them reflect on the quality of their learning, while at the same time stimulating them to search for evidence-based standards as basis for assessing their learning performance.

METHOD

In all, three female students (two from the University of Copenhagen, one exchange student from Roskilde University) from the Seminar volunteered to participate in the interview-based study. After the third class, I invited all the attending students to take part in the interviews after a short illustration of the study aims. I allowed the students one week to decide whether to participate or not. However, three students decided immediately to be involved in the study, and no other student subsequently expressed his/her willingness to participate. I decided not to contact those students that did not show up for the third class - which in general were those with low attendance rate in general - since a crucial eligibility criterion for participation was having attended most of the classes (at least the three involving CBL activities). All interviews were scheduled and conducted in the first half of the week after the last (fourth) class to ensure that the students had recent memory of their experiences. The interviews lasted 1h 15' on average.

The interviews were semi-structured. I prepared an interview guide with the following open-ended questions focusing on the four elements of learning addressed in this study:

- How was your learning experience in the two different case-based activities that I proposed during the course?
- How did the group you belonged to work while dealing with the cases provided?
- What was your experience with the role playing activities realized during the classes?
- How did the feedback received from your peers and the teacher impact your learning?

To ensure that students, while providing their answers, referred to their specific teaching experiences during the course and not to more general cognitions and attitudes about the themes addressed, before each question - particularly the first and the last one - I provided them with a short summary of the relevant TLAs. In particular, I invited students to think about what did and what did not work in these activities, referring both to their personal experiences and to the perceptions shared with the other peers. When problems were detected, I asked the interviewees to think of how these gaps could be filled to improve the learning experience in future courses.

I examined the information obtained with the interviews through thematic analysis (King & Horroks, 2010). For the purposes of the present study, I sought to identify core aspects in student experiences relevant to the four elements of learning addressed in the study. Given the low number of informants, it was at times not possible to identify recurrent themes; to preserve variety in the information collected, though, I opted for reporting also those experiences that were reported by one student only. Selected interview transcripts were shown in the text as illustrations of the themes that emerged.

RESULTS

Inductive learning potential

When asked to compare their experiences with the CBL activities using the two different approaches described earlier (see Box 1), all three students gave clear preference to the second one. The main reason was that the second teaching situation was seen as more effective in making students critically reflect on which could be the best actions to include in the OHI plan proposal in relation to the management phase:

"I preferred the second approach as it made me reason more about which actions were more appropriate for that particular company" [student A].

"The first approach was about what I'm learning today, the second was more about where I am now in my learning. In the second situation I had the possibility to kind of test how far I was with my ability to critically think about the specific case and find the best fitting solutions for the organization we were dealing with. I used my prior knowledge of what it takes to set up a good management process as a guide – a sort of catalyst - for taking decisions that were valid from the scientific perspective, but still the mental effort was high when I tried to figure out which actions should be done and why in that particular context. Then the feedback we got from the other students and from you was important as it showed the weak spots in our proposal, what we missed out in our plan" [student B].

"I think the second approach worked best because you have to think more when you do things autonomously…then when I got feedback from my classmates and you I said to myself 'oh, I should have considered that too or I should have done it differently'; the difference here is that when you receive this feedback you now see clearly why using certain theories and methods may help you understand and solve the concrete situations you tried to handle while working on the case. This was possible with the second case, while in the first case we just had to make sure that some actions were included in each of the phases, but this limits in a sense your reasoning about why these actions should be put in. You trust that this is the right way of doing because some authority has previously thought about it. While the second approach did activate me more as I was more into thinking why it was important to include these actions and not others, you have to provide solid justification for your choices" [student C].

These reflections clearly indicate that the second approach to CBL was more effective than the first one in bringing about inductive learning. Students were in fact prompted to a higher degree to critically think of and provide justifications for the actions they decided to include in the OHI plan proposal; this led them to generate a need for using scientifically validated theories and procedures to support a more informed decision-making in the concrete situation. By contrast, the first approach was less inductive since the students felt that they just had to make sure that all the appropriate actions indicated by the theories and procedures taught during the lecture were included in the OHI plan. Students were therefore

less inclined to reflect autonomously about the right actions to propose and to provide justification for them.

Despite this, as mentioned in the Introduction a potential problem while using inductive learning in CBL relates to the level of experience of students in a class. With specific regard to the OHI topic, poor work experience may be particularly relevant:

> "*While working in group, I got to notice that some younger students had problems with the second case; they thought they could have made a better OHI proposal if they had a more detailed knowledge as it happened with the first case where you gave us a lecture before we started with the case. Grappling with a work organization might be quite challenging for students without experience in real work settings, in fact some of my peers were a bit confused at the beginning of the assignment as they did not know how to approach the complexity of the case".* [student A].

The is an important point as it may suggest that the second approach to CBL may have made some students uncomfortable with working on cases when equipped with theoretical knowledge at low levels of elaboration and contextualization. This might induce a tendency to apply general theories and procedures without considering the specific characteristics of the case assigned. Careful attention should be thus paid, when designing and implementing CBL activities, to the average level of experience among students attending a specific course.

A final theme that emerged was linked to the importance of reading the literature assigned before the class when working on cases. This was for instance well illustrated by a student:

> *"While working with my peers on the cases, I noticed that the level of preparation on the assigned literature was mixed. This may lead to difficulties in reaching a consensus in the group on how to approach a case…I mean the type of consensus that you want to reach about using common good scientific approaches to problems. This happened in my group, and what I did to prevent low quality was to take leadership together with another peer that was fairly well prepared. However, I think that this was no good for the non-prepared ones as they did not really contribute to the OHI plan".* [student B].

Although this reflection may pertain more to the group work topic (see below), it also indicates that pre-preparation on theories and procedures is a core element when it comes to the quality of learning when using CBL. In fact, it should be pointed out that a low level of

knowledge structure prior to the CBL activity only means that the teacher abstains from providing students with in-depth elaboration and contextualization of the taught theories and procedures, so that the students are more induced to make sense of the situation in an autonomous way and realize the usefulness of applying evidence-based approaches to the given problem. However, possessing a sound theoretical and methodological knowledge, as for instance provided through the assigned literature, is key for ensuring that the decision-making process operates at a decent scientific level while analysing the case. Otherwise, the risk is engaging in common-sense non-scientific approaches leading away from the academic level required at this level of education.

Group work

All three students interviewed recognized the importance of working in group in the context of CBL. As for instance reported by one student: "*The diversity of backgrounds brought by different students made me consider different possible perspectives while designing the OHI plan for the case provided*". [student B].

However, the interviews made also clear that a set of problems might have influenced negatively the quality of group work activities realized during the course. In particular, the problematic level of student engagement was a central theme reported by all three interviewees. An important point made by one of them was that the context for choosing a specific seminar instead of another one is a crucial factor explaining the motivation level to be expected among students in a class:

> *"The level of engagement in class influenced a lot the quality of group work. For instance I noticed that out of 15 students only let's say 6/7 used to come to class with the assigned literature being read. Many students just did not have the spirits to be there. I think the reason for this is that some were exchange students, even if I am one of them… this course was chosen by some exchange students (some foreigners and some coming from other Danish Universities) because they needed it for the ECTS and not because they were really interested in it. It was very easy to get into this course because there were more posts available here than in other courses. You just have to do the course, so they are not engaged. They just didn't want to spend much time in learning the topic because they were not really interested in it"*. [student B].

The relatively low average level of engagement of students resulted in a host of problematic consequences impacting on the quality of group work: a) non-constant attendance by some students, limiting the integrity of the groups working on the cases across successive classes; b) imbalances in the level of contribution given to the group by the different students; c) potential segregation in different groups of students with and without preparation on the assignments prior to the class (*"The level of engagement leads you also to choose who to work with. For instance I tended to prefer being in a group with some of my peers that I knew were more engaged, this is not by chance. If a student has prepared herself for the class, she has chosen that class, I can learn something from her, so I want to stay in the same group with her"* [student B]); d) the more engaged students stopping at some point to talk in class as they were afraid to be designated as "brainiacs" (*"An issue is that if you are the engaged one and you are among the few always asking questions, at some point you feel that I should shut up because I'm saying too much, I should also give room to the others to talk. This also affects the engaged ones because as I shared with others classmates you don't want to appear the one showing off so you hold back from asking questions…but this is going to affect your learning because you end up not asking questions to the teacher that might be crucial for your understanding"* [student A]).

Regarding point b, as discussed earlier student A also recognized that the lack of previous work experience of some students might have affected their contribution to the group. A further issue raised was the level of spoken English (students B and C), making some of the less fluent students not willing to share their thoughts with the group. Interestingly, concerning point c student B (i.e., the exchange student from Roskilde University) mentioned a huge difference she noted between her University and the University of Copenhagen with regard to the extent one could expect an average student to show up to a class while having prepared him/herself on the assigned material ("*If students in the same group have different approaches to what you are supposed to do as group member, for example having read the literature before a class, the level of outcome of the activity can be unclear and of low quality. Those who have not read the literature could feel a bit insecure, they do not speak up, when you are in a group you easily spot the ones who haven't read the literature. You can safely assume at Roskilde University that everybody has read the literature before the class, if you haven't done so you are sort of sanctioned so you don't want to be singled out as the slack…you might get very embarrassed for this. Perhaps the reason for this is that the University of Copenhagen is not much about working on cases and interacting with students, is more lecture-oriented").* This shows again the importance of considering the broader context – also in cultural terms – when assessing the quality of involvement of

students in TLAs. This is in line with the concept of the "implied student" (Ulriksen, 2009), indicating a student's expectations about the correct way of behaving during his/her university education, these expectations being shaped by culture and the associated socialization processes.

All students interviewed provided some feedback on concrete actions that could be taken to improve the general level of engagement and participation in the class. These could be grouped in basically three categories: a) including activities where each individual student is required to give a personal contribution to the case at hand ("*If you have a case to work with, you can ask students to think individually and build hypotheses about how to work out specific aspects of it. These hypotheses can by written on Post-Its and hung on the wall, then each student must provide justifications for them. This way you set a class climate where each student becomes aware of the level of contribution he/she is expected to give individually to the group during the case"* [student C]); b) planning sessions at course start focusing on rules of conduct in and outside the class, which should be set by the teachers but also negotiated among all the students *("At the beginning of a course a teacher could do more to stress the type of climate he/she would like to have in a class. This is possible to do especially in a seminar because students stay together for long"* [student A]; *"Be more clear that you will disappoint the other students in your group if you don't read the case or miss preparation on the assigned literature"* [student B]). As further pointed out by one student, however, setting and negotiating rules are activities that should be reiterated during the course to ensure that a good climate of equality in terms of contribution is maintained and reinforced; c) planning CBL activities where students have to work as groups also out of the class ("*This would improve the quality of case-based work in class but would also make the students know each other better, it would increase the perception of each member that she is working in a team and that she has personal responsibility in the outcomes of a team*" [student B]).

Role playing

There was a general agreement among interviewees about the effectiveness of role playing as a way to immerse students in the typical dynamics occurring between consultants and employers/managers when presenting OHI plan proposals:

"Being asked to act as consultant and present your project to a potential employer leads you to pay particular attention to the feasibility of the plan you propose. This is because you as consultant have to sell your product to managers which always have in mind the limited amount of resources they can invest, and then you become more aware that this factor should be always taken into account when preparing your proposal. Otherwise you have to be very smart and convince them how beautiful is your project so that managers get enthusiastic about spending more resources on it". [student A].

"Role playing worked because when you act as consultant it makes you pay a lot of attention on being systematic and understandable in your presentation to managers…so you have to improve your ability to communicate and become a good seller. Also, if you have to present a project in class you are forced to talk, which improves your communication skills for the simple fact that you make experience of it". [student C].

The reason why role playing worked well seemed to relate in particular to the fact that it configured a high-stakes situation where students understood that the way OHI proposals are presented makes a difference in terms of the chances an occupational psychologist has to obtain a consultancy contract.

A reflection made by one student indicated that role playing might be especially crucial in the context of CBL activities where students have to work on hypothetical cases - as it was the case in this Seminar - instead of real ones:

"In real situations, every assignment you have to deal with – such as preparing an interview to administer to real employees as I did in a previous course – is a high-stakes situation, because errors have real implications, for instances if you don't think of important ethical issues during the assessment process. Although this is not something you can completely obtain with hypothetical cases, when I had to act as consultant while presenting our proposal it made me feel that I needed to be careful and prepare a good OHI plan and be good at communicating it". [student C].

Two proposals were made by students to further improve the role playing activities. First, one student pointed out that the instructions I gave could have been more clear

about the roles that the students were supposed to play while preparing and presenting the OHI plan for the first case.

> *"Regarding the first case there was a different understanding between the two groups on how we should work on the case, that is the type of Power Point presentation we had to make. I think the instructions for the assignment were not quite as clear as they could have been. In fact in our group we spent more time negotiating the aims of the assignment than doing the assignment itself. I think the other group did a better presentation that ours because they addressed both scientific precision in designing the OHI plan and the need of being good sellers, while we only focused on the scientific quality aspect of the project. You could maybe try to ask direct feedback from students about whether they understood the assignment in the correct way".* [student B].

The second possible improvement involves providing more feedback on the level of communication skills demonstrated by the students while presenting the OHI proposal *("I would have liked some more feedback from you and the other group about how well or bad we did when communicating the OHI proposal. You gave us some good feedback after we did the presentation but I guess a summary of the main points for improvement could have been handy as I understand that being good communicators is so important to be successful consultants outside there"* [student A]".

Formative feedback

As a whole, the students interviewed indicated that the formative feedback activities succeeded in making students reflect on the quality of their learning, both in terms of the contents learnt and the process of learning itself:

> *"In the first feedback activity the fact that we had to elaborate convincing answers to the two questions that the other group asked us - from the employer's perspective - about the OHI proposal made us think about the gaps in our work, which were not few actually! But the main issue here is that we had to search ourselves for the quality standards to use to give good answers. So we went back to the literature and the lecture material, but we also relied on our own reasoning about how things in our proposal could be improved. This feedback activity worked good also because it was closely linked to the role*

playing situation. This motivated us to provide qualified answers to convince the employer that we have effectively addressed their concerns. After all we want to get the consultancy contract!" [student A].

"Especially the request you made to prepare points for feedback on our presentation made us realize how important is to anticipate possible gaps and alternatives ways of acting when preparing and presenting your OHI proposal. What worked very well is that we had to think ourselves about what is good learning when deciding about the possible gaps we wanted to get feedback on from the other students. This was even more effective as while preparing these feedback points we were asked to play the role of the company's employers and managers; this motivated us to focus on potential weaknesses because the same issues might be raised by the company and the ability to address them might make a difference whether you will get or not the consultancy contract" [student B].

These reflections clearly suggest that the act of responding to questions and that of requesting feedback were both useful ways to develop self-learning skills, since the students were held responsible for selecting the quality standards against which to identify potential gaps in the proposed OHI plans. If the feedback came from the teacher only, the depth of reflections among students concerning the quality of their learning would have been reduced (*"As students we sometimes take for granted the quality of the feedback given by the teacher, so you are not stimulated to think about what are the standards for judging whether what you've learnt is good or bad"* [student C]). These transcripts also suggest that the fact of carrying out formative feedback activities in the context of role playing may represent a key factor for supporting their effectiveness. Role playing was in fact able to create a high-stakes situation (*"You want to get the consultancy contract"* [student A]) motivating students to carefully search for the highest quality standards possible to identify and correct pitfalls in their performance.

The students also mentioned two conditions as being crucial to ensure that formative feedback works effectively: a) the general level of competence among students (*"Peer feedback works mostly in graduate courses because Master students are almost done with their education and are supposed to know good contents and also to know what is good learning or not. But of course also the level of preparation on the specific course subject counts a lot"* [student B]) and b) the need for peer feedback to be complemented by feedback given by the teacher (*"The teacher is very important here because he or she has to facilitate*

the feedback process by identifying which are the most important aspects that the feedback should focus on" [student B]; *"The teacher should always complete what said by the students with his or her own feedback so the students feel more confident about the quality of the feedback received by their peers"* [student C]).

Finally, two out of the three students came up with proposals on how the formative feedback activities could be improved. A common theme was concerned with the necessity to allow more time for both summarizing and using the feedback received. Regarding the first point, one student proposed to arrange wrap-up sessions where students are given the opportunity to summarize the main feedback points received (*"Although the feedback received was nice I would have preferred something written at the end of the feedback sessions. The students themselves could do it by summarizing the main feedback points received by both the peers and the teacher"* [student C]). Concerning the second proposal, another student mentioned that regarding the first case-based study I should have allowed students more time to use the feedback received for revisiting the OHI plans *("I think at the end of the course you could use the feedback received during the classes to go back to the initial call-centre case and revise it. Perhaps you can ask students to work together in the week between the two last classes and revise the OHI plan using the feedback received. The last class could then be an occasion where students present the final Power Point slides in the same role playing situation as before"* [student B]*).*

DISCUSSION

Guided by the transformative reflection paradigm (Biggs & Tank, 2006), this pilot study aimed to identify the utility of collecting in-depth student feedback as a way to improve quality in the use of CBL activities. The interviews proved to be a rich and fruitful source of information concerning both positive and negative aspects in my teaching practice. With specific regard to the Seminar considered in the current study, they revealed learning experiences that corresponded with the intentions behind my choice of designing the TLAs in a certain way. However, and most importantly, they also pointed to a number of gaps that I can use to start a reflection of how to enhance the CBL activities so to make them more aligned with the course ILOs.

The uniqueness of in-depth student feedback as compared to other types of feedback (e.g., feedback received from pedagogical supervisors or peers) may be seen in the fact that the

former provides the teacher with especially detailed information about the reasons why some aspects of a given TLA might have worked while some others might have not worked as planned. If a teacher believes that a certain TLA will activate students in a certain way toward the achievement of a specific ILO, the logical test bend is searching for relevant information helping him/her to find out what has actually happened in students during that TLA, both as individuals and as member of a class/group. A privileged way to acquire this sort of information is to go directly to the source, i.e., by asking students to report their own experiences while engaging into the TLAs proposed during a course. In this manner, it can be possible to grasp the complexity of the individual- and group-level dynamics occurring during the learning experience, and shed more light into the root causes of any success or failure in the TLAs realized. External observers may no doubt be highly instrumental in capturing elements of the teaching practices that need to be revised for improving quality of teaching; however, observation may not be able to provide the necessary insight to seize the complexity of certain dynamics influencing the learning experience. In addition, some TLAs, such as CBL, commonly unfold along different classes, making often impractical for external observers to follow the teaching activities all the way through, limiting the validity of observation as tool for assessment. Also in the presence of comprehensive observations, however, the limitation might still be that certain subtle dynamics in the learning experience remain unreachable. To illustrate, from the interviews conducted in the present study it was clear that issues related to group functioning influenced many of the elements of learning addressed in the interviews. The informants revealed fundamental problems in how some students performed in the group (e.g., low engagement and poor contribution of some of them), which might have adversely affected the achievement of some ILOs, e.g., the development of the capacity to work in a team. These group dynamics, underlying failures in the way the TLAs were realized in the course, might be discovered more easily if one relies on an “insider” perspective by involving students in the feedback process. The cost of not doing this might be that some negative aspects of the TLAs realized remain undetected, with inevitable implications on the quality of teaching.

The results of this pilot study, although limited in several respects such as the restricted number of students interviewed and its focus on one teaching method only, may be seen as a first indication that in-depth student feedback may serve as a useful tool that teachers might consider to adopt for improving quality in their teaching practice. It may be in fact expected that the benefit of in-depth student feedback extends also to other teaching methods beyond CBL. Of course in-depth student feedback should be seen in integration with other frequently used forms of feedback, including pedagogical or peer supervision, mid-term and final

student evaluations, and the recourse to authoritative references in the field of higher education. The superior approach lies always in the use of a mixed-method approach where in-depth student feedback is triangulated with the other sources of feedback mentioned above. Triangulation can be particularly helpful to systematize the information collected from students into a more coherent revision of one's theory of teaching that should inform future changes in teaching practice.

Given the above-mentioned limitations of this pilot study, for the time being I do not feel like providing any strong recommendation on how to implement in-depth student feedback in one's teaching practice. However, based on this study and the reflections that ensued, I can propose the following four points, among others, that may be taken into account by teachers that are considering the use of this form of feedback:

- In-depth student feedback may be expected to bring the highest benefits when it is collected in a structured way. This means that student opinion should be obtained in dedicated time and space settings, so as to promote focus and favour deep reflections about what happened during the learning experiences. Although also episodic student feedback, e.g., during or after a class, can be useful, the risk is that it addresses only partial aspects of a given problem, while not allowing the kind of in-depth reflections needed to elucidate the implications that the issue raised might have for the quality of learning.
- Other qualitative approaches alternative to individual interviews, such as focus groups, might be equally valid as methods for collecting in-depth student feedback on their learning experience. Focus groups might be more time-effective and provide a more representative overview of student learning experiences. However, individual interviews might be more practical as solution in certain circumstances, as was the case in this study, where it was difficult to recruit enough students to form a focus-group. In addition, in qualitative research even few informants may convey reliable information providing that the questions asked are spot-on and that the interviewer is skilled enough in the technique. For instance, a useful strategy, which I used during my interviews, could be asking students, while providing their answers, to refer to both their personal experiences and to what they have heard from their peers during the frequent informal interactions happening in and outside the class.
- To maximize it effectiveness in improving quality of teaching, a teacher might consider to collect in-depth student feedback while focusing on specific aspects that he/she seeks to improve. A criterion for selecting what to address may be, as I did in this study, to

limit the collection of feedback to the TLAs that are most commonly used by a teacher in his/her courses.

- Quite obviously getting feedback on one's own teaching practice ends up being a purely reflective exercise if it not followed by real changes made in successive courses where the same teaching techniques are used. The notion itself of transformative reflection implies a process whereby reflection is used as a tool to bring about real transformations in the teaching practice. A useful methodological approach that could be considered to make transformative reflection "operative" is action research (Kember & Kelly, 1993), which in the context of teaching "involves changing aspects of your teaching systematically, using whatever on-the-ground evidence that you can obtain that enables you to judge if the changes are in the right direction" (Biggs & Tang, 2011; p. 51). Action research is thus seen a cyclical process where a teacher uses reflections to plan and apply new practices of teaching, and evaluate their effectiveness in a continuous tension toward improving teaching quality.

To illustrate the last point, in the period I am writing this paper I am using the feedback collected from students as a basis, in combination with other activities I engaged in during the TLHE course, for a personal reflection on how to improve the use of CBL in my next course dealing the OHI topic. In particular, I deemed the following indications to be particularly useful for improving the CBL activities I will implement in the new Master level Seminar in Work and Organizational Psychology during the Autumn term 2015:

- Allow more time at the beginning of the course to get to know the students and their reasons for choosing the Seminar, and to negotiate rules of conduct concerning teacher-student and student-student interactions, emphasising aspects such as class attendance, equal contribution to the group and the importance of preparation on the assigned material prior to the class. Rule negotiation should be reiterated during the course with the teacher but also within each group autonomously.
- Complement group work with activities stimulating each individual student to contribute with his/her personal reflections on the course content, for instance through the use of portfolio assessments or by asking each student individually to elaborate hypotheses on given problems and provide argumentations in support of them.

- When forming groups, try to find a trade-off between spontaneous grouping and the need to balance group mix so that diversity of backgrounds (e.g., experience and motivation level) is ensured in each group.
- When deciding on the extent CBL should prompt inductive learning, consider the overall degree of student experience (including previous participation in courses involving CBL) and set the right level of knowledge structure before they are presented with the case.
- When using the role playing technique, improve on the clarity of the instructions given concerning the role that students should take on while analysing the case.
- Allow students more time for summarizing and using the feedback received to revise and improve the work made on the cases assigned.

Within the action research framework described above, the new Seminar will enable me to evaluate whether the implementation of CBL activities as revised in accordance with the above-mentioned indications will actually improve student learning experiences for a better achievement of the course ILOs. The evaluation will be carried out using different sources of feedback, including in-depth student feedback. The results of this evaluative process will be presented in a future paper.

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Web sources

http://www.hbs.edu/teaching/inside-hbs/

Appendix A.

Seminar: "Employees' Personality, the Psychosocial Work Environment, and Organizational Behaviours"

09.04.2015. The "real life" of assessing the psychosocial work environment: case study.
Teacher: PM Conway

CASE STUDY

Scenario

You are associates of an emerging consultancy business in the field of occupational well-being, and this is why a large-size Danish telecommunication company has contacted you to carry out an extensive psychosocial assessment within the Customer Service area. Beyond the legal requirements, this employer is profoundly committed to improving the psychological health and motivational levels of call-centre (CC) operators, with a view to increasing their performance and consequently the company's revenue.
The employer has asked you to present **a proposal detailing the various phases of the psychosocial assessment**, focusing on CC operators only. The information provided below together with your knowledge of psychosocial working conditions in call-centres will support you while preparing your proposal.

Company description

SMILECOM (fake name) is a large-size telecommunication multinational corporation with branches in many countries worldwide. In Denmark, the Customer Service area is segmented in eight sites distributed across the country. It employs about 1500 people, 93% of which are call-centre (CC) operators (the number of operators working in each site may vary). The remaining Customer Service workforce is composed mainly of team leaders (each supervising about 15-20 CC operators), area managers (supervisors of team-leaders), HR and administrative staff. Among CC operators, the majority are women (nearly 80%), with a mean age of 33 years (about 75% under the age of 36) and a mean job seniority in the company of 8 years. CC operators may hold a temporary or a permanent contract.
All CC operators work in open spaces. Each individual workstation is equipped with a personal computer and a telephone. Call-centre operators are provided with single-use monaural (one-ear) headsets. All calls (incoming and outgoing) are managed through an IT system.

CC operators can be basically distinguished into in-bound and out-bound operators.

In-bound operators (about two thirds of CC personnel) are mainly involved in answering calls from private and business customers. Calls received are primarily concerned with enquiries from customers related to the use of mobiles and smartphones (e.g., technical problems, questions regarding the services available, billing issues, etc.). Calls are distributed to in-bound operators through an automatic IT system, with a maximum interval of 30 seconds between two consecutive calls. In-bound operators are strictly monitored (but only at a group level) through quantitative key performance indicators such as the average call duration. Team-leader often walk around the workspaces listening to calls and urging operators to cut on call duration. In-bound service is available 8-22, 7 days a week. About two thirds of in-bound operators work *part-time* on three rotating shift, each shift lasting 5-6 hours depending on the individual contract (e.g., 8-14, 14-20, 18-24). They have a 30-minute break for lunch (or dinner) and another two 15-minute breaks during the working day. *Full-time* operators work on two rotating shifts of 8h each (e.g., 8-16, 14-

22). For full-timers, lunch or dinner breaks last 1h, and they are also allowed two 15-min breaks in a workday.

Out-bound operators (about one third of CC staff) are mainly involved in contacting private customers to promote products and/or services or in retaining those customers that want to unsubscribe. Contrary to their in-bound counterparts, at the beginning of each shift out-bound operators are provided with a portfolio of customers to call, and they have some influence on how to manage call distribution and duration. Out-bound activities run h10-20, from Monday to Friday. These employees may be part-timers (5-6 hours), working on two rotating shifts, or full-timers (8 hours). Breaks are the same as among in-bound operators.

A small proportion of Customer Service employees is involved in **back-office activities**, not including telephone contacts with external customers. These employees typically deal with paperwork mainly in relation to billing issue.

Class assignment (in groups)

Read the case and prepare an actionable proposal (max. 5 PPT slides) describing the different phases of the psychosocial assessment for the case presented (focusing on CC operators only), taking both 'content' and 'process' elements into account (30 min exercise). It is important that you address the following questions while preparing your proposal:

- What information will you ask the company to provide in order to prepare a "realistic" proposal?
- Which activities will you propose in relation to the preparation phase?
- Which are the most important work factors you will measure in the assessment?
- Which assessment instrument(s) will you use? How will you prepare it(them)?
- Which and how many employees will you involve in the assessment?
- What alternative ways of realizing the assessment could you consider depending on the amount of resources the employer will invest in the assessment?
- How will you present the results to the company?