PBL, internationalization, and multicultural groups.

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1. Purpose of project and approach

The project departed from challenges found at many universities (including AAU) attempting to combine internationalization and extensive use of student-centered/directed group work. The 2016 AAU study environment survey identified issues related to the integration of Danish and non-native students in some international programmes, suggesting that students may de-select multicultural project groups and thus the opportunity that such work units provide for intercultural competence development. The project sought to address the problem by:

1. Increasing students' and supervisors' awareness of benefits and learning potential of multicultural teamwork
2. Preventing frustration and unproductive tensions by making students and supervisors aware of potential challenges
3. Providing concrete tools/instruments that can support multicultural group work

The project group approached our task in three stages:

1. Initially, the group conducted an extensive literature review of previous research on internationalization and multicultural project work, using this to identify issues of relevance to our project. The literature study was complemented by a questionnaire, which was distributed to 13 groups/63 students in spring 2017.
2. Next, the group focused on providing support for students' multicultural groups. First, we produced a series of six leaflets, which presented key challenges related to multicultural, PBL groups as well as possible strategies for addressing these. The leaflets were relatively short so they might be used either as hand-outs in project supervision or classroom teaching. Second, three project groups from the MA programme in Culture, Communication and Globalisation were invited to test the learning materials, which were presented to them in tutorials dedicated to multicultural teamwork.
3. Finally, the learning material was evaluated by students in focus group interviews following the students' oral exams. This allowed for the identification of new topics that students considered important as well as issues that students either found were irrelevant or suggested we might approach differently. The students' recommendations have been included in this report and formed the basis for a discussion with AAU supervisors at the one-day conference on "Multicultural teams and problem-based learning", held at AAU April 17 2017.

This report will present our core findings in three sections: First, we will summarise the insights gained from the literature review and how this influenced our development of the six leaflets. Next, we offer a reflection on the learning material developed, highlighting the concerns raised by the students when

assessing the leaflets. Lastly, we conclude by summarizing our recommendations as well as any knowledge dissemination activities undertaken by the group.

2. Identification of main challenges in multicultural group work.

Existing research on multicultural groups and own experience as supervisors in international programs informed the selection of topics that we deemed necessary to cover in the PBL 'leaflets'. Despite the optimism regarding the potential of multicultural group work to provide excellent conditions for intercultural competence training, many studies report on problems and challenges, supporting the view, which this study has also taken as its point of departure, namely that both researchers, administrators, teachers and students need more knowledge on multicultural group processes (Cotton, George & Joyner 2013). In her qualitative study on Australian business students, Burdett (2009) found examples of marginalization and exclusion of international students, which was mirrored by the dissatisfaction of domestic students who faced the task of introducing international students to the academic and institutional culture, whilst ensuring that the academic product (group assignment) was of the same quality as one carried out in a monocultural team. Similarly, Harrison reported in his 2015 review study that: "There is considerable inter-study agreement around the existence of academic homophily among home students and the reasons for it, the most powerful of which is an anxiety that international students will compromise their marks" (p. 422). Harrison and Peacock (2010) offer multiple examples of marginalization of international students, even to the extent that domestic students may write the parts of international students in order to avoid grades being lowered as a result of non-native speakers' insufficient language proficiency. Typically, domestic students would construct themselves as experts, positioning foreign nationals as novices, which might prevent them from harnessing the diverse areas of knowledge that international students bring into group projects (cf. Leki 2002). Hence, students constantly evaluate and form stereotypes of each other, seeking to strategically secure project partners who are considered 'safe' or 'reliable' (Christensen 2016).

PBL in multicultural groups – the design of learning material

The problems identified in the literature on multicultural project groups include: marginalization in group processes, exclusion due to communication barriers, perceived language weaknesses, and the distribution of group roles based on stereotypes such as 'the expert domestic student' or the 'novice international student'. This motivated our selection of four topics that seemed particularly relevant for our project: *Group work*; *Roles in group work*; *Global English*, and *Diversity*. In addition, the literature suggested that the themes of *supervision* and *group formation* might be relevant to include, bringing us to a total of six themes. The format of the leaflets was chosen to meet the following criteria:

- they are easily accessible (without talking down to the student reader)
- they take a point of departure in the students' own experience;
- they are kept short (a student can for example read a text when commuting to a group meeting on campus)
- where relevant, they contain instruments that can be used as self-reflection tools, group exercises, or inspiration for group discussions.

The leaflets all refer to topics dealt with more extensively in the paper *Problem-based learning in multicultural group work – an introduction.* Both paper and leaflets are accessible from the website of the C-Inter research group: http://www.en.cgs.aau.dk/research/academic-networks/c-inter/resources/

3. Assessment of learning material, results

In the interventionist stage three multicultural project groups were introduced to the project "PBL, Internationalization and multicultural groups" and to the six leaflets (handed out as hard copies to the participating students). The material was introduced at individual meetings with each participating group, meaning that all students had ample opportunity to ask questions. These meetings were placed shortly after group formation and allocation of supervisors. The students agreed to read the material thoroughly and participate in a group interview once they were well into the project writing process. The idea was for the students to reflect on the material in the middle of the process of actually doing multicultural group work and to have the students evaluate the usefulness of the texts. A final interview was conducted shortly after the completion of the project work period and the oral group exam. The intention was to cover experiences of group work in the more stressful phase of finalizing the project report, preparing for and participating in the oral exam, and again have the students evaluate the content and relevance of the produced texts.

The next part of the report will present the six leaflets in more detail, including the feedback received from the students and our recommendations, as to how this material may be further developed.

Group formation

The purpose of the leaflet was to make students aware of different principles for the formation of groups and the effects that these principles have for the functioning of groups. The leaflet tried to convey the idea that students should be open to the idea of consciously seeking group members who through their diverse competences and backgrounds would allow for creativity, multiple perspectives and access to diverse forms of knowledge, for example in terms of different languages.

Main findings

The participating students reported that the approach to group formation was decided by the program. The students were supposed to select their group members themselves facilitated by group formation events arranged by the program. Based on the students' comments on the leaflet and the topic of group formation in general we can establish the following:

- Group formation is an event of major importance for the student's academic results and general wellbeing in the program. This confirmed our impression of the need to address this topic explicitly.
- Group formation is to a high extent student-driven. Students are motivated by interest in specific topics, but, at the same time, they try to identify fellow students whom they can get along with socially. Without this being a deliberate strategy on behalf of the students, this can easily lead to relatively homogenous groups.
- Group formation is generally described as a challenging, somewhat confusing, and socially not entirely comfortable process.

Recommendations

Apparently there is a gap between the positive effects of diversity-oriented approaches to group formation and reality where students are not placed in a situation where they can reflect on group formation principles and act accordingly. When students explained how they got to work in their group, they feel that they were 'lucky' to end up in a well-functioning group.

Programs are encouraged to consider how students can be supported in their group formation processes. The findings suggest that the reluctance to work in multicultural groups may have something to do with the somewhat challenging circumstances that students are expected to find their group partners in. The use of group work as part of classroom teaching allows students to learn more about each other before group formation. In such settings the teacher may decide to apply different group formation principles in order to illustrate the value of them. Principles of group formation can be discussed in forums where students have a say, for example in study board meetings. While self-selection seems to be the preferred approach among students, different principles could be applied in different semesters, helping students to build up a broader repertoire of contacts and thus paving the way for more diverse groups.

Group work

The purpose of the leaflet was to make students reflect on the dynamics of group work, especially in relation to mutual expectations (how are expectations clarified, and what happens if expectations are not met?). The leaflet suggests that students use some form of formalized agreement, e.g. a code of conduct, in order to clarify mutual expectations initially and solve collaboration problems during the working process. In some programs, it is recommended that students use collaboration contracts.

Main findings

Although almost all had unpleasant experiences from previous group work, where fellow students had not fulfilled expectations, the students shared a certain reluctance to establish a clear code of conduct for the collaboration. Although they found that, in principle, it would be a good idea, they did not find that it would be necessary in the groups that they worked in at the time – because they got along so well. Attempts to formalize the kind of 'good group behavior' that participants already demonstrated could jeopardize the positive social relations that had already been established within the groups.

Whereas establishing 'codes of conduct' appeared to be too drastic for the participating students, groups had documents that functioned in a similar way. For example, one group maintained a 'project plan', outlining deadlines, expected group achievements and individual contributions. As one student explained, once the group had agreed on the project plan, she knew that she could count on her group members to do their part, and she felt comfortable that the other participants shared her level of ambition and work ethics.

Recommendations

Collaboration problems in terms of discrepancies between expectations and actual behavior (addressed in the literature as 'free-riding' or 'social loafing') are not unusual and often part of the student's 'baggage' of knowledge on group work. At the same time, building a good social climate within a group

of people with little knowledge of each other is a delicate process that might be 'disturbed' by explicit discussions of formal codes, contracts, and agreements.

Given the prevalence of negative group work experience, it might be a good idea to institute codes of conduct as a mandatory part of group work, potentially supported by the supervisor. A standard template could be provided by the programs (example: https://www.northumbria.ac.uk/static/5007/arpdf/aq/groupworkguidelines)

Group roles

The purpose of the leaflet was to make students aware of the fact that students often choose the same roles when they participate in group work. However, learning to work in teams involves the ability to take on *different* group roles.

Main findings

The students' reading of the leaflet suggested that the typical pattern of group roles would be a distribution of roles based on expertise and interest: student A would be responsible for researching and writing drafts of the theory of science section, student B for a specific part of the theory presentation etc*. In none of the cases did the work distribution change during the project process*. This interest-based role distribution was supplemented with one position encompassing the functions of coordinator and supervisor contact. None of the groups felt the need to appoint a formal leader, but recognized that there had in fact been an "informal leader" throughout the process.

When asked if the informal, interest-based distribution of roles and responsibilities could somehow be problematic, students responded that they had a thorough knowledge of the entire project, also the parts written by other students. Still, for supervisors it can be recommended to pay attention to students' internal distribution of work, not only in terms of group roles but also in terms of distribution of content to be covered. While group diversity can contribute positively to the breadth of knowledge resources in a group, it might also encourage individual students to focus on the specific knowledge area that they bring into the group

Recommendations

Students' informal and fluid group roles seem to be rather different from team work models that are based on formal and explicitly allocated roles. The approach chosen by the groups could potentially lead to students developing a less comprehensive knowledge of the subject area. Also the informal character of the coordinator role makes it easier for a domestic student familiar with administrative practices at AAU/ a specific department to take on this role. In consequence, we should like to recommend that students be encouraged to consider the distribution of responsibilities in what might be perceived as a more 'professional' way, e.g. by allocating specific areas to subgroups of 2-3 students rather than divide the work into subtasks to be covered by the individual student.

Global English

There were several purposes connected to the leaflet Global English. One is to make students aware that in multicultural group work, many varieties of English come together. While some students may have difficulties understanding varieties of English spoken by other students, it is important to recognize

that the varieties are equally valid for group communication. At the same time, each student should also be made aware of his/her own level of English competence.

Main findings:

The discussions with the students demonstrated the relevance of the addressing language in texts supporting group work. However, what also emerged was that the students' key challenge was not the varieties of oral English within the group, but rather that the ambition to secure the quality of academic written English in the project, which turned out to *be more time-consuming than expected.*

Within the groups, which were all composed of individuals who were all second-language speakers of English, there was a remarkable consensus in terms of the criteria for what constituted good academic English. This indicates that 'global English' is understood as very diverse (in this case encompassing German, Spanish, Estonian, Russian and Danish varieties of English). At the same time, students identified as a linguistic challenge their need to distinguish between *"correct academic English in written form"* and *the more incomplete/incorrect language used for draft writing*. In all cases, students reported that throughout the proof-reading and revision process there had been an overall consensus on what constituted 'good academic English', which suggests that the students' English, in its written form, is standardized enough to be effective in terms of successful communication of academic results both among the students and to supervisors and censors (in all cases, the groups were told at the exam that their reports had been well-written).

Recommendations:

The participating groups all applied strategies that can be broadly recommended: early scheduling of a designated proof-reading period as part of the project plan and arrangement of collective proof-reading or peer-proof-reading. Proof-reading might here involve both collective proof-reading (display of text via projector) and mutual proof-reading and demand several days of working long hours. No groups mentioned a possible role for supervisors or programmes in assisting students' development of their oral and written English, yet this could be a factor influencing academic success.

Diversity

The purpose of the leaflet was to help students understand how they can use each other's diverse resources in their project work. The leaflet built on a relatively open conceptualization of *multicultural*, highlighting how in addition to more traditional aspects such as nationality, language, gender and age, this might include educational background, disciplinary expertise, professional and/or international experience. The leaflet presented a diversity mapping tool, encouraging students to present and share the diverse resources that they bring into the project work.

Main findings

When presented to these resources, students generally agreed that working in diverse groups offers a rich learning potential. However, when directly asked how they would feel about using the diversity mapping tool, they commented that the use of such a tool would have both positive and negative aspects. On the positive side, it would clarify in a concrete sense which forms of knowledge and skills were present in the group (for example knowledge of specific languages). On the other hand, several

students feared that a mapping could also entail a certain degree of 'labeling', and that an identity might be ascribed to a student, which the student did not want to identify with. Thus while the students showed enthusiasm in relation to the idea of working in diverse groups, would like to continue to work in such groups and did not recall having ever felt reluctant to work with anyone because s/he was 'different' from themselves, the students emphasized that one should have the freedom to present oneself as one sees fit and to remain silent about aspects of one's identity that one does not want to highlight. Yet the discussion also revealed was that students were not always aware of *how* in a concrete sense they may use each other's competences. One example was given by a Russian-speaking student, who was surprised to learn that she could have used her language skills to include Russian texts in the project.

Recommendations

The reluctance to use diversity mapping methods that would require students to describe their background and previous experience *in writing* may be ascribed to the fact that students cannot remain anonymous when disclosing such information in a small-group context. Thus a supervisor might help a group elicit relevant information on diverse/unrecognized resources by highlighting the advantage of, for example, access to texts written in languages spoken and understood by the students. At the programme level, students' ability to recognise diverse resources can be supported by highlighting in project writing guidelines the possibility of including texts in different languages. Finally, it is recommended that the awareness of how diversity is addressed, is increased. If diversity is always framed as nationally defined difference, the distance to the application of national stereotypes is short. Addressing diversity in programs, in classrooms and groups is first and foremost a matter of acknowledging the student as an individual with particular experiences and resources that can be used when designing and solving the problem motivating the students' teamwork.

Supervision

Students coming to AAU from other Danish or international universities bring with them diverse supervision experiences, and the purpose of the leaflet on supervision was therefore to highlight to students what approaches to supervision that they might experience at AAU. A central concern was different expectations about student/staff roles and relationships, which in an internationalised university may challenge the collaboration between a project group and the supervisor. The leaflet contains instruments that can help students and supervisors clarify mutual expectations.

Main findings

The participating groups presented their current collaboration with their supervisors as positive and productive. This, however, is not something that can be taken for granted (based on the students' previous experience) and supporting texts suggesting methods of clarification of expectations were generally welcomed.

The second interview with the participating groups took place after the project exam. While the purpose of this was to investigate collaboration processes during the more stressful period of finalizing the project, the perhaps most interesting finding was related to the project exam itself. In all cases, the exam was described as a discontinuous experience in relation to the project supervision period. This led

us to conclude that the project exam must be addressed separately in a new leaflet. Students experiencing a well-functioning project supervision process were still surprised by the exam experience, which suggests that the shift in role from the supportive supervisor to the critical examiner might confuse some students.

Recommendations

The interviews support the assumption that clarification of expectations – both in an academic and a practical sense – is crucial in the supervisor-student collaboration. It is recommended that programs encourage discussions between supervisors and students that can achieve this goal, and that students and supervisors set aside time for this. For supervisors, it is also important to *reflect on how the exam can be experienced by students as aligned with the supervision process*. The main source of frustrations and also formal complaints is exactly the perceived discrepancy between the supervisor's guidance and recommendations and how the exam actually plays out. Within an exam-based system like the Danish university system, it is a paradox that relatively little attention is paid to the short span of time – the exam – that often comes to define the project learning experience for the student.

4. Summary of key recommendations

Based on our reading of existing research on multicultural teamwork, the learning resources produced for the current project and our interviews with three project groups about their experiences with managing group dynamics, roles, language and diversity, the previous discussion has foregrounded a number of areas where students' multicultural teamwork can be supported and indeed strengthened. These recommendations require action taken by AAU departments, programme conveners/Study Boards, project supervisors and students, respectively, as indicated in the table below.

Recommendation	Department	Program	Supervisor	Students
Better conditions for group formation		X		
Provide concrete experience of different group formation principles in classroom teaching			X (as teachers)	
Accept and promote different forms of group formation in different semesters		X		X
Make group codes of conduct mandatory		X		
Ask groups how responsibilities and roles are distributed, question distribution if necessary			X	
Avoid knowledge monopolization and fragmented project texts				X
Offer language courses/support to help students develop their written academic English	X	X		
Secure good conditions for language revision/ proof-reading instead of marginalizing/excluding less proficient group members				X
Discuss which diverse resources are present in the project group			X	X
Mention explicitly that texts written in other languages than English can be used in project		X	(X)	

work, and that it can be a good idea to include speakers of different languages in project groups				
Consider the discourse on diversity prevalent in the program	**X**	**X**	**X**	**X**
Clarify mutual expectations in group supervision			**X**	**X**
Consider how coherence between supervision and project exam can be achieved			**X**	

Knowledge dissemination

A key ambition for the project group has been to disseminate knowledge about multicultural groups to students, supervisors and programme conveners at AAU, aiming to initiate an identification of and discussion about pedagogic strategies and practices that can be used to improve students' teamworking skills. Ideally, we should like to see all AAU graduates requiring competences in 1) multicultural teamwork and 2) intercultural communication and learning, thus enhancing their employability in a globalised labour market.

To disseminate the insights gained through our project we have used a variety of formats:
First, the project was presented at the kick-off event for PBL Development projects, January 2017, and at 'Undervisningens Dag' 2017. This enabled us to make contact with colleagues from other departments and faculties, working with issues related to ours.
Second, we produced one extended paper on multicultural teamwork, which forms the basis for the six leaflets targeting students and supervisors involved in multicultural teamwork. The six leaflets and extended paper are distributed via the home page of the network *C-Inter* and thus freely accessible to students, staff and professionals with an interest in such matters.
Thirdly, workshops were held with three project groups, their supervisors and teachers involved in the MA programme in Culture, Communication and Globalisation in autumn 2017. We originally planned to organize workshops for all students and supervisors, but found that the more intimate setting of a tutorial including the project group, their supervisor and an 'expert' member from our team proved beneficial in terms of ensuring dialogue and student feedback on our material.
Finally, we organised two one-day conferences in May 2017 and April 2018, dedicated to the themes of *Intercultural challenges in PBL education* and *Multicultural groups and Problem-Based Learning*. The two events attracted around 60 colleagues from AAU and other institutions, enabling us to compare our findings to the experiences of other study programmes. We have had very positive feedback from participants in these events, with several suggesting that they should like to see an annual seminar dedicated to the broad area of 'PBL, multiculturalism and internationalisation'. In addition, we have been contacted by local educational institutions such as University College Nordjylland and the IB branch of Hasseris Gymnnasium, who should like to use our expert knowledge in this area.