Increasing Social Integration in an Interdisciplinary MA Programme through Group Work

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Introduction

In an interdisciplinary MA programme, it is especially important that the students get socially integrated from the beginning. Most often not only the place and people will be new but also the field of study. This can be difficult to handle without a network. In this project I will investigate using group work to help initiate social integration. In this context, I will also reflect on the different group work I conducted.

Challenge

A general issue in Danish higher-level education is that – contrary to recommendations in the Bologna process[1] – an MA programme is most often treated as a continuation of a BA programme and not as a new beginning. Therefore there is no introductory phrase where the students can get socially integrated.

I am teaching at the MA programme IT and Cognition (IT&C), which is not the natural continuation of any particular BA programme, such as e.g. an MA in linguistics would be a natural continuation of a BA in linguistics. As a consequence, the students have very different educational backgrounds (from philosophy to computer science) and come from all over the

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[1] http://www.ehea.info/Uploads/(1)/Bologna%20Process%20Implementation%20Report.pdf

world (from China to the US), so they have very different prerequisites and do not know each other. Something that they do have in common, is that they need to form a new interdisciplinary identity and a new academic network. The course I am teaching is an introduction to the programme, and it is the first course the new students encounter.

Generally, social integration has been shown to have a positive impact on student success leading to less dropout (Tinto 1993). An academic network where you can discuss your subject outside class, is very important both for your level of learning and your perception of the programme. This will be even more outspoken for students moving to a new country and a new study field, where they inevitably will have caveats in their knowledge. All this makes it important to create a learning environment that encourages social integration.

Approach

I have chosen to experiment with group work – within and outside of the classroom – as a catalyst for social integration. The motivation for this is that it creates a forum where the students are encouraged to interact with each other and thereby get to know each other. Engstrom found that a contributing factor from group work was that "students developed a sense of community or family" (Engstrom 2008, pp. 12). Contrary to this, Braxton et al. (2000) to their own surprise do not find a significant correlation between group work and social integration. They however offer critique points to their own measurements in the light that other peer engagement does show a positive correlation.

Group work was also chosen because in class it can be a good teaching/learning activity to break up a lecture and activate the students. This may have a beneficial effect on the student's learning compared to a more passive lecture scenario. Rather than receding to a comfortable and safe role as spectator in class, the students are assigned co-responsibility for creating a productive learning environment.

The students are divided in study groups at the beginning of the programme based on diversity in background, but the teachers have previously not used these very actively. They are more thought of as a forum where the students can help each other at their own initiative. Last year many of these groups never took off, and the teachers were not in touch with how they were running. Most often the students need incentive to start using the

groups. I will provide this by placing a major focus on group work around specific tasks in the course. This will also provide a more dynamic learning environment compared to pure lecture-based learning.

Biggs and Tang (Biggs & Tang 2011, pp. 165) note that a successful group work should be controlled by the teacher with an atmosphere where the students feel they can discuss uninhibitedly, and the students must be sufficiently prepared to be able to contribute to the group. It is therefore important to create a setting where the students know what they are supposed to do, and where the teacher is guiding the processes without interfering too much by validating, which can discourage the students from wanted to provide an answer themselves. In stead the teacher's role should be to lead the students in the right direction when they are stuck or have gone astray (Bolton 1999).

Implementation

Classes are two-hour sessions (90 minutes teaching). To obtain constructive alignment (Biggs & Tang 2011) with the final exam of the course, where the students should present a research paper and criticize it, there is a main focus on student presentations of research papers in each class. The 90 minutes are generally split in three 30-minute sessions to accommodate the fact that the attention span of adults doing something they find interesting, is no longer than 20 minutes (Cornish & Dukette 2009, pp. 73). Two of the 30-minute sessions will be allocated to group work:

1. **Lecture**. This session is a slide-based lecture presenting the topic of the day.
2. **Student presentation** of a research paper relevant to the topic. These sessions are based on the study groups. The presentation is prepared and presented by the entire group. Each group will make at least three presentations throughout the course. The rest of the groups upload two clarifying and an open research question for the paper to Absalon at the latest two days before class, so the other groups and especially the presenting group can be inspired by the other group's questions. Besides forming the basis for discussion after the presentation, this exercise also motivates the others to read the paper and discuss it with their group.
3. **Group assignment or an additional student presentation**. For group assignment, the groups will be presented with a problem that they have

to solve as a group. This could be explaining an algorithm so everyone in the group understands it and apply it to an example manually.

As a final group exercise we use the two final classes for a **group workshop** where the groups focus on a research paper and create a research plan for an experiment to extend the work done in the paper. This plan is presented and discussed in class on the second day.

Evaluation

The group work is evaluated using introspective judgments from the students gathered through a questionnaire. Appendix A contains the questions and the student response. Out of a total of 24 students, 20 replied to the questionnaire. The questionnaire makes the students reflect on different aspects of the group work conducted throughout the course: 1) **group paper presentation**, 2) **group assignment**, 3) **group work shop**, and 4) **overall group work** during the course. In addition to the judgements, students were also able to create individual comments, which quite a few did (between 5 and 12 comments per question).

Analysis and Discussion

From the student response, there is very high agreement that the group work was a helpful factor in initializing social integration (on average students agree/strongly agree that "group work helped me get to know my new fellow students"). In hindsight it would have been interesting to ask the students how important social integration is to them and their education as a supplement to the correlation.

Group work is however only one initiative to initiate social integration, and it should not stand alone. From the comments provided by the students in the questionnaire and through personal conversation, it seems that the many students have become integrated with the other students in their group but not integrated in the rest of the class. As an example for further initiatives, Braxton et al. (2000) suggest that faculty classroom behaviors and active learning in general has an influence on social integration. Also it might be a good idea to reassign the groups every semester to create new connections.

Looking at the different types of group work conducted, the students were generally on the positive side of the scale. For *group paper presentation*, the students were generally positive towards the group work and felt they learnt something from the preparation and presentation part. They were less positive about the question preparation. This probably reflects that the questions were not utilized in the best way in class, where they were meant as a basis for discussion, so the students should bring them up themselves. This lack of control had a negative influence. Many students comment that they did not prioritize this very high, felt it was not used in the best way, or split up the work to individuals. In the future, one modification to accommodate this might be to have a single designated opponent group creating questions for the presenting group. A general issue for *group paper presentation* was that the repetitiveness of the exercise seemed to introduce fatigue. Experiencing the same group work every week for a semester becomes predictable, and at the end student engagement seemed to decline.

Most of the students were happy with the *group assignments*, which were assignments that I felt worked really well. The main comments from the students were that they did not posses the skills required yet at that stage. I was not aware of this the first time, so I modified the assignment. Another problem was that 30 minutes was not enough, and often the students did not finish the task. In the future, I would assign more time to the sessions.

The *group work* shop was also received well by the students. Some comment that it was a more interesting task than merely presenting a paper, or that the session showed them that they had learnt a lot during the course. Others felt they would have liked more validation to resemble the exam more.

A surprising response was that the students did not feel it helped being in mixedbackground groups. Many comment that they did not notice this very much, and others felt they were imposing on the others if they had difficulty keeping up. Some however write that they gained a lot from being able to draw on the strength of the others. I still believe that the mixed groups are to be preferred over group similar backgrounds together.

Conclusion

In conclusion, the students were very positive towards the group work. They both felt it improved the class and their learning. Also it did seem to have a positive effect on social integration, which I believe is very important in an interdisciplinary programme. It is however important to keep thinking of the learning objective of the sessions, so the group work doesn't just become an unconscious reflex, but has a purpose that makes sense in the exact situation it is being deployed.

A Questionnaire and Response

The table below represents the questionnaire sent to the students and their response. The questionnaire uses a Likert scale for the students to judge the statements on the left. The *Mean judgment scale* is an average over all judgments where 1 is *strongly disagree* and 5 is *strongly agree*.

Group Paper Presentation						
Questions. The following statements concern the group work of formulating questions for the other presentations.						
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	I did not attend	Mean judgement scale
Our group worked well together in creating the questions	10%	15%	10%	45%	20%	0%	3,50
	2	3	2	9	4	0	
I learned a lot from these sessions	10%	15%	15%	40%	20%	0%	3,45
	2	3	3	8	4	0	
Preparation. The following statements concern the group work of preparing the presentation.						
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	I did not attend	Mean judgement scale
Our group worked well together in preparing the presentation	0%	10%	10%	35%	45%	0%	4,15
	0	2	2	7	9	0	
I learned a lot from these sessions	5%	0%	15%	55,00%	25%	0%	3,95
	1	0	3	11	5	0	
Presentation. The following statements concern the group work of presenting the paper.						
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	I did not attend	Mean judgement scale
Our group worked well together in giving the presentation	0%	5%	15%	35%	45%	0%	4,20
	0	1	3	7	9	0	
I learned a lot from these sessions	0%	10%	25%	30%	35%	0%	3,90
	0	2	5	6	7	0	

Group Assignment

In class, we had four group exercises centred around the implementation of machine learning algorithms. Please indicate your response to the following statement about these sessions.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	I did not attend	Mean judgement scale
I enjoyed these sessions	0%	10%	15%	65%	10%	0%	3,75
	0	2	3	13	2	0	
I learned a lot from these sessions	0%	5%	30%	55,00%	10%	0%	3,70
	0	1	6	11	2	0	

Group Work Shop

In the final classes, we had a group workshop session. Please indicate your response to the following statement about these sessions.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	I did not attend	Mean judgement scale
I enjoyed this sessions	5%	0%	10%	35%	30%	20%	4,06
	1	0	2	7	6	4	
I learned a lot from this session	5%	0%	5%	40%	30%	20%	4,13
	1	0	1	8	6	4	

Group Work throughout the Course

Please indicate your response to the following statement about the group work.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Mean judgement scale
My group has been functioning well	0%	5,26%	15,79%	36,84%	42,11%	4,16
	0	1	3	7	8	
The group work made classes more interesting	0%	10%	5%	50%	35%	4,10
	0	2	1	10	7	
The group work increased my learning	0%	10,53%	21,05%	36,84%	31,58%	3,89
	0	2	4	7	6	
The mixed academic background of our group members helped my learning	5%	30%	15%	30%	20%	3,30
	1	6	3	6	4	
The group work helped me get to know my new fellow students	0%	0%	10%	35%	55,00%	4,45
	0	0	2	7	11	