

Breakout session on “How best to support learning communities”

Thursday 6th August 2020

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Physics LTHE breakout room notes – How to support learning communities

Anecdotally the gender split is different at different institutions. Some evidence points to women being more concentrated in the middle of the band, while men have a broader spread. This may be related to different willingness to take risks. The addition of ‘scaffolding’ to courses was thought to help women more than men, but a more detailed study showed that in fact it improved results for people in the middle group, which is logical in hindsight.

There is the question of understanding the ‘hidden language’ in e.g. exam questions. Shared backgrounds and experience make it easier to determine what is required.

Do other subjects see similar issues? Not a lot of evidence available in the room, but generally it was thought that this may be less of an issue in other fields.

Just measuring by attainment is not the best measure, it would be better to know how well a student has progressed through their degree to see if they have had the best value from the course. Quantifying ‘value’ is an extremely difficult problem and would likely have different answers from different people.

IOP had a conceptual understanding of physics project using MCQs before and after 1st year courses (ECUIP?) that may hold useful information on what students learnt, particularly how it may be linked to protected characteristics.

Neurodiversity is a big factor in how students get on in a course, particularly in tutorial groups. Awareness of this has become more widely known recently, so it may be this has not been measured well in the past. Strong promotion of some types of active learning (e.g. peer-led learning) can result in a very stressful environment for some students. How should we make allowance for this given that some students really thrive on group learning activities, where others dislike them? Some students will choose not to get involved in group activities, which can cause upset for the others. ‘Best practice’ may be doing the best for most people resulting in those that do not like group learning losing out.

Maybe with the move to online and blended learning we can enable more different ways of learning so that students can learn in the way that suits them best. Using e.g. chat as well as video discussions enables different voices to be heard and lets different students speak up. Should we let people choose to be in groups by their preferred communication methods to enable students to participate as much as possible?

The lecturer should be the one to create the groups to ensure that they are diverse in terms of characteristics and skills, which is to the benefit of the students as it enables them to perform better at more complex tasks. When creating groups, it should be considered if it is a group or a team. Teams need complementary skills to achieve their goals, while groups work together to help everybody advance. Teamwork is of course a vital part of working life and we need to get students used to this idea. Different people have different ways of constructing groups, (e.g. careful tuning or more free and easy) which can be purpose-dependent.

The improved community feeling reported by physics student taking courses in other departments may be linked to the fear of appearing foolish in front of their peers. In other environments, students feel less exposed and so are happier to participate.

Is there a risk of fostering a 'fixed view' of personality traits, e.g. getting students to think that they are introverts/extroverts and that will not change? This is a classic problem in social science, hence the ethical review process to try to address the issue.