3

Promoting deep-learning by increasing student participation and formative feedback in the MSc course "Principal subjects in Molecular Cell Biology and Immunology"

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Project background

Students employ different strategies for learning based on their academic backgrounds, previous learning experiences, and different factors in their current learning environment. These factors include personal motivation, which is often reflected by how students perceive the relevance of a given subject, the teaching environment, e.g. the relations between the student and the teacher or between peers, the overall workload of that course/program, the nature of the Teaching-Learning Activities (TLAs) and how these relate to the assessment of learning outcome. As a teacher, we can only influence the current learning environment, but to encourage deep-learning, we must nevertheless be aware that the students' backgrounds and motivation differ and frame teaching and learning activities according to the students' possibilities of engaging in these. When designing TLAs, it is also important to reflect on how these activities relate to the skills and knowledge that the students are supposed to acquire and whether the assessments/exams are aligned with the Intended Learning Outcomes (ILOs). Misalignment between assessments/exams and ILOs could backfire in that it may encourage student to employ a surface approach to learning, rather than encourage high-quality learning. According to Bigg´s model on "constructive alignment", high-quality learning outcome is maximized when the ILOs are well aligned with the TLAs and assessments (Biggs, 1996; Biggs & Tang, 2003).

Thus, students are more likely to employ a deep learning strategy during a course, when they are tested on their capacity to apply the skills and knowledge stated in the ILOs to a general problem, rather than on their ability to memorize and reproduce information. More recently, Hounsell and Hounsell have employed the term "congruence", "as a means of capturing the interrelationship between high-quality learning outcome and the strategies deployed to pursue these outcomes" (Hounsell & Hounsell, 2007). The term congruence builds on and expands Bigg's model of constructive alignment to include interrelationships outside the inner teaching-learning environment, e.g. the congruence of course organization and management, which could be heavily influenced by external factors including university politics. Therefore, when evaluating how well ILOs, TLAs and assessments are aligned, it is important to acknowledge that university courses, which could be seen as teaching-learning environments, are subjective realities that might differ significantly from the perspective of the students, colleagues, course organizers, and the organizers of the university program. So, as teachers, how do we ensure that there is an alignment of expectations between students and teacher? When used constructively, feedback from the teacher is an efficient way of guiding and communicating their expectations to the students, while feedback from the students can inform the teacher of how they actually perceive the teaching environment (Ellegaard et al., 2018). Despite feedback being widely recognized as an efficient means of stimulating and enhancing deep learning, it is often not sufficiently implemented in teaching. Many students experience that they receive to little feedback and/or assessment of their activities and that this affects their learning process. Ideally, feedback should constitute an ongoing dialogue between the teacher and the students, allowing the students to monitor their own progress and construct new knowledge based on the feedback provided by the teacher, while providing teachers with a means to monitor the progression of the students and adjust TLAs accordingly. Using feedback in teaching and teaching the students how to provide constructive feedback has the additional advantage that students learn to use the evaluation criteria and standards objectively, so that they can apply them more easily to monitor their own work.

For this project, I wanted to implement a number of changes in the MSc course, "Principal subjects in Molecular Cell Biology and Immunology", with the aim of stimulating a deep-learning approach by maximizing student participation in TLAs and encouraging peer feedback. These changes were inspired by my own reflections on the course (see below) and

by data collected during semi-structured interviews of two students that had followed the course (see appendix A and below). The questions in the interviews were designed to learn more about who the students are and how they perceive the TLAs and the feedback provided during this course.

Project preparation: analysis of the "Principal subjects in Molecular Cell Biology and Immunology" course

The "Principal subjects in Molecular Cell Biology and Immunology" course consists of three modules that can be followed separately. The first two of three modules are based on 3-hour weekly journal clubs focusing on molecular cell biology and immunology, and the criteria for passing is that students have participated **actively** throughout the course (min. 80% of the teaching sessions). There are about 25 students in the class, and for each teaching session three students are each assigned to present one paper preselected by the teacher. Each teaching session begins with a 5-7 mins devolution phase on the overall topic, and is then followed by three consecutive presentations of journals and discussion in plenum. The ILOs of this course include that "*the students should be able to demonstrate a capacity to critically understand original scientific research papers, including knowledge and understanding of the specific problem to be analyzed, the experimental set-up, the methods employed, the experimental results and the conclusions drawn from these, and discuss this understanding with fellow students"*. The third module, which can only be completed after passing module 1 and 2, consists of a three-week take-home written assignment followed by an oral examination of 45 mins without preparation. Module 3 could be seen as an extension of module 1 and 2, in that the students are expected to demonstrate *"an ability to critically understand, explain and discuss the relevance and potential impact of a certain given research area in a written form, understandable to fellow students"*. The grade in module 3 is based on an overall evaluation of the oral and written parts of the exam. Whereas module 1-3 are mandatory for master students following the Biochemistry program, it is optional for students following the Biomedicine program, who can choose to follow just module 1 or 2 or both. At a first glimpse the teaching-learning activities proposed in the course description (oral presentations of original literature by students covering the principal subjects of the course) are well aligned with the ILOs (see above) and the assessment, which is provided in the form of oral feedback from peers and the teacher. However, what could potentially be a major pitfall of the course

is that it relies heavily on being able to monitor the participation of the students during the course, as there is not final exam. The students are all expected to read and prepare questions for the discussion of the papers in plenum, but according to one of the students I interviewed, this is not actually assessed: *"you do not really have to read the papers, there's no.... no one is going to ask you directly if you have a question, and also yeah there is no exam and you are not asked any questions during the lecture it is not really that motivating, I feel like... at all" ......"I noticed that some are not asking questions during any of the sessions, and I think there is a way to improve that"* (see appendix A). The students' motivations for participating actively in the course might also differ according to the program they are following. Thus, students following the Biochemistry program might be more motivated to participate actively in module 1 and 2, as they will rely on some of the skill developed in these modules for the written and oral exam in module 3. However, students from Biomedicine could be more inclined to pass module 1 or 2 with a minimum effort in the absence of a final exam. The expected workload for module 1 or 2 is 28 hours for colloquia and 178 hours for preparation. It is therefore crucial for the ILOs of the course that the students spend significant time preparing for class. Another possible complication of the course is that 9 teaching sessions should be coordinated between 5 teachers, which could compromise the overall coherence between different teaching sessions. Both of the students I interviewed found that the different sessions appeared very much like separate entities rather than being related to each other and thought that overall coherence of the course could be improved by expanding the devolution phase and by teachers drawing connections to previous sessions (see appendix A).

As the oral presentations represents the only means for the teacher to evaluate the students, and the feedback provided by the teacher and the peers the only possible way for students to construct knowledge from their experience, I asked two students if they thought they were getting sufficient feedback on their presentations. Student 1 thought that the nature of the feedback varied a lot and that students should be more implicated in giving feedback: *"It is quite different... some teachers were perhaps nice saying that it was a good presentation, even though everyone could tell that it was not, whereas other teachers pointed out that perhaps you could have had more focus on this or include more of that or perhaps you should present things differently.... So I think that it is great that we have this presentation, but that there should also be some feedback so that one knows what*

was good and what to improve for next time". "One of the lecturers asked the other students about their opinion of the presentation and I thought that that was great getting feedback from the other students". As highlighted in the introduction, students often experience that they do not get sufficient feedback and that this greatly impact their learning outcome. Providing formative feedback on the oral presentations in this course is particularly crucial, as students rely on this feedback for obtaining the ILOs. Student 2 agreed that more feedback could be provided and thought that the students should also be provided with clearer guidelines for how to make a good presentation: "*there could be some more focus on the presentations, how to do a good presentation, for instance, when that is the only thing you have to do during the course. "It would be nice to have some more introduction to how to go through a paper when presenting".*

Armed with the information that I obtained from conducting semi-structured interviews with students, I decided to implement a number of changes to the "Principal subjects in Molecular Cell Biology and Immunology" course to improve 1) student activity, 2) assessment/feedback and 3) congruence between the individual teaching sessions. These changes were originally centered around class-room teaching, but due to the COVID-19 situation, they were adapted for an online format.

Implementing changes in the "Principal subjects in Molecular Cell Biology and Immunology" course

Based on my own analyses of the course and the data collected during the semi-structured student interviews, TLAs could be improved in a number of ways to ensure that students obtain the ILOs described for the course. The lack of a final assessment at the end of the module 1 and 2, means that student participation should be reinforced by other means, as pointed out by both student 1 and 2 (see appendix A). Due to the COVID-19 situation, the journal-clubs could not be carried out in class, and the students were instead asked to upload videos of their presentations in Absalon. As one of the interviewed students pointed out that she would like more guidance on how to present original research data (see above), I provided them with detailed guidelines for how to prepare a journal club (see appendix B). The idea was that this guide could serve as a reference point for presenters when creating their presentation, but also for peers when giving feedback. The online format made it hard to monitor if students were participating actively. I therefore asked all students to hand in a short summary of the

three papers presented in each session within 24 hours of watching the presentations. As suggested by one of the interviewed students (see appendix A), I provided three questions for each paper that they could use as starting a point for writing up their summaries. The purpose of these questions was to make the students reflect on the central points of the paper, but I left it up to the students if they wanted to make use of them. To ensure that students actually watched the uploaded presentations and to increase peer feedback, I asked all student to provide peer feedback on each of the three presentations. For this purpose, I provided them with a feedback guide explaining them how to give feedback and importantly what they learn from giving peer feedback (see appendix C). Finally, I asked them to provide feedback on the teaching sessions and some of the things, I had implemented in the teaching. For each of the presentations, I provided a rather long formative feedback pointing out things they did well and things that could be improved. In addition, I provided feedback on the assignments handed on by the students not presenting, which included the three summaries of the presented papers and the peer feedback on the presentations.

The relatively high number of teachers (5 different) for the course (9 sessions) makes it a challenge to present the course as a coherent whole. This was also pointed out by both of the interviewed students that both emphasized a lack of connectivity between the different teaching sessions. Student 1 thought that a more profound devolution by the teacher would help putting the selected papers into a context thereby making them more relevant (see appendix A). During my two teaching sessions, I expanded the devolution phase to give a more thorough introduction to the topic covered in the presented journals (these were provided as uploaded videos). In the last session of the course, I provided a short overview of the topics covered in each of the individual sessions and pointed out how they were connected.

Project findings and evaluation

To get some general feedback on the teaching sessions, I asked the students to provide written feedback on what was good and could be improved. Generally speaking, the students found that extending the devolution phase from 5 mins to 15 mins provided them with a much better overview of the topics discussed in the papers. One student wrote: "*I liked how you provided a longer introductory video involving diagrams, to the theme of cell competition. Particularly because I was unfamiliar to this concept before this*

class and it helped me understand". When asked how whether the overview I provided of the topics covered in each of the individual sessions helped them seeing how these were interconnected, one student wrote: "*Yes, especially since this course does not end with an exam or sum up, the overview you provided in the extended introduction was really helpful to connect the whole course and its relevance for our specialisation"* and another: "*a good and useful introduction, that helps binding all the sessions together and see the bigger picture*". It is worth noting that I did not receive much feedback on this particular initiative, which might reflect that the last teaching session coincides with many students being busy with exams. It is also possible that students did not put the usual time and effort into watching the introduction **online** and/or providing written feedback as they would have done if attending the class physically. As a teacher, it was also quite time-consuming to produce this overview, as it involved carefully reading all the articles the previous sessions. So ideally, the connections between the different topics of the course should be highlighted on a regular basis during the course, not just at the end. To facilitate this, each teacher on the course should provide the other teachers with a short summary of their topic and the key points they plan to cover at the beginning of the course.

To encourage a deep-learning approach, I had uploaded three questions for each of the three presented scientific papers. The questions had been designed in a way that necessitated careful reading of the articles and a critical reflection on the central claims stated in there. When asked whether these questions helped focusing on the essential points of these papers, the students unanimously expressed that they were a great support for reading, understanding and focusing on the essential findings in the papers. One student wrote: "*Yes, it helped me narrow my focus to the most important findings of the paper and highlight it in a way that will enable me to remember it for a longer period, I think/hope*". Reading the summaries that the students produced, I found that they overall did a very good job at identifying the main findings and shortcomings of the papers, so the questions seemed to work according to the intention. Getting a written summary of the three papers from each of the students also provided me with an opportunity to monitor their learning outcome, provide feedback on their work, and, if necessary, to correct potential misunderstandings. However, in their feedbacks, many students expressed that one of the major drawbacks of the online format of the journal clubs was the workload associated the written assignments. One student that I interviewed at the end of the course said: "*It actually took me an incredibly long time to make the summaries in the as-*

signment, because I am not used to doing it. I thought it was really demanding. . . .It is probably too much to ask students to prepare three summaries each week". So, although the implementation of written assignments was efficient in promoting a deep-learning approach, the overall workload was overwhelming for a number of students. When designing future teaching sessions, it is therefore worth reflecting on whether the written assignments could be divided between students so that each student would only need to provide a written summary of one of the three papers.

One of the things that many students agreed could be improved was some of the limitations posed by the online format including journal clubs not being conducted in real time, as this meant that there was no way of having a dynamic two-way discussion during the presentation. The decision of asking the students to upload their presentations as videos was an emergency solution to the acute and unexpected lockdown of the university caused by COVID-19, which happened from one day to another. Should a similar situation occur, it would be preferable to do the journal clubs in real-time using zoom or another equivalent online tool. Nevertheless, I found that the online format provided some opportunities for testing alternative ways of implementing feedback. In addition to my written own feedback, I had asked students to provide a written peer feedback on all three presentations. To evaluate how the students presenting experienced the amount and quality of the feedback they received, I conducted a semi-structured interview with one of the students who presented during the COVID-19 lockdown. When asked about the peer feedback she received, she said that: "*There was more feedback than usual. That was good. It was also good to have written feedback and to be able to go back and read through it again to see what was actually good or bad.*" She also thought that the written feedback from the teacher was more thorough: "*My feeling is that it was longer and more detailed and more useful*". It therefore seems like there are some clear advantages of getting written feedback that could be explored when going back to class teaching.

Conclusions, learnings and future perspectives

To stimulate deep-learning and increase learning outcome, I introduced a number of changes to the "principal subjects in cell biology and immunology" course that aimed at maximizing student participation and reinforcing feedback/assessment. Due to the COVID-19 situation, many of the oral

TLAs, such as oral discussions in the class room, had to be changed into written assignments/feedbacks. Although this altered the teaching format and some of the initiatives I had originally planned for this course, it provided also provided me with some valuable ideas of how to increase student participation and peer feedback in "normal" classroom teaching. I found that asking students to provide written critical evaluations of the three presented papers was very efficient in stimulating deep learning, although, several students found that the workload associated with this task was too high. A reasonable compromise between deep-learning and workload could therefore be to divide the class in three and ask students to hand in a written critical evaluation of one of the three papers. To ensure that the students read all three papers, they could be assigned as opponents and responsible for conducting the discussion on one of the other two papers.

The implementation of written feedback from teacher and students was very successful in increasing the quantity and quality of the feedback on presentations. As there is no final exam on module one and two on this course, feedback plays a critical role in the assessment of the students, and should therefore be reinforced in "normal" class teaching. One way of doing this, would be to ask the students to provide both oral and written feedback on the presentations. While the oral feedback is important for creating a dynamic discussion in the class, the written feedback tend to be more detailed and structured. And as one student pointed out, it was also useful to be able to go back and read the feedback a second time. Asking students to provide a written peer feedback would not be too labor-intensive, as this could be done during class, but it would serve the purpose of increasing student participation and practicing feedback skills. For optimal learning outcome, teachers should provide written feedback on both the presentation and the written assignments (summary of one paper + peer feedback).

One a more general note, I found that the data collected by performing semi-constructed interviews on students following the "Principal subjects in Molecular Cell Biology and Immunology" course had a great impact on how I choose to redesign the TLAs emphasizing the importance of knowing who the students are. As course evaluations tend to have poor feedback rates and be less nuanced, it could be of general interests to teachers and course organizers to get a more thorough perception of the course from the student's perspective, either by conducting semi-structured interviews (this might be too time-consuming) or by asking the students to provide short (5 mins) anonymous feedback/reflections on what worked well and what could be improved at the end of each teaching session. For this to be

efficient, it would be important to explain the students what the purpose of the feedback is and how they are likely to benefit from it.

References

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A

Semi-structured interviews (transcribed)

Student 1:

1. Is the amount of time spend on preparing for classes appropriate? (*less time used than described in the course description*)
    a. If not, then how should the workload balance be changed?

2. Is the academic level of the course appropriate? (*Yes, appropriate and relevant*)

3. How do you find that the different teaching sessions relate to each other given the number of different lecturers? *"It is very different depending on the teacher and the day….normally for each teaching session, the teacher presents himself, the topic and then why he/she has selected those papers. However, I think that if would be great if this part could be extended and more thorough and relate to the previous teaching sessions, so that the course seems more connected as a whole. And that would clearly also be more motivating than the teacher just dumping a random topic".*

4. Would the course improve from having a short re-cap of the previous lecture at the beginning of the class? (*Yes*)

5. Is the motivation to prepare for class sufficient in the absence of grades? *"For me, I think it is not the grade that is decisive for whether I will read the papers, it is more having an exam in the end". "I think that for many students that are up for exam and get grades, they follow the classes as much as possible, and I feel that I put the same amount of effort as if I were following a course without exam, but it just that at the end when you are reading up for the exam, then it's as if you sum everything up". "I think it would work well with a non-graded passed exam for the first two modules".* Student 1 emphasized the benefits of having an exam at the end of the course as a mean to motivate the students to get an overview of what they had learned, as there is not always sufficient time to get into depts with all topics during the course.

6. How do you estimate your learning outcome in this course (module 1 and 2) when comparing with courses that are graded? *"I think that grades could have the effect that you say what the teacher wants to hear".... you do not just question things, which is one of the things that are really great about this course, where you can ask anything that comes to mind, with respect to something you have doubts about methodically or generally". I can have a course with a graded exam and work really hard on it and know everything within that field, but then one or two weeks later…. Unless I work with it, and here I feel like I am using the tools that a acquire, because I read research papers normally when I am doing a project or when you want acquire knowledge within a specific field".*

7. Do you consider that you as students get sufficient feedback in this course – from the teacher/peers? *"It is quite different…some teachers were perhaps a by nice saying that it was a good presentation, even though everyone could tell that it was not, whereas other teachers pointed out that perhaps you could have had more focus on this or include more of that or perhaps you should present things differently….. because that is also something that is important to know within this field that…. we present what we found and that has to be*

done in a good way so that all can understand". "So I think that it is great that we have this presentation, but that there should also be some feedback so that one knows what was good and what to improve for next time". "One of the lecturers asked the other students about their opinion of the presentation and I thought that that was great getting feedback from the other students".

8. What were the most important knowledge/skills that you acquired during this course? (*Learn to read a paper critically, and to consider the methods used, being introduced to different model organisms*).

9. What is good about the course? Why? *"That there is focus on the papers and that you have to be able to analyse and present them, but also that in some way is more oriented towards discussions…or at least they try to do so many of them.* Student 1 enjoyed the dialogue, active participation and discussion in these teaching sessions as opposed to lectures where the focus is on the content of the book and what is right or wrong

10. What could be improved? *"I thought that the sizes of the class was too large with respect to the debates and discussions, because when there are that many people then you can more easily hide while others are leading the discussion". I: would it help to discuss in smaller groups first? Yes, I think so …. then you feel a bit safer about what you say, because you are not the only one to think like that and perhaps other could agree". "But I also think that making the course more coherent so that you create a unit..I perhaps in some way…..some of the teachers start by presenting the topics, but I think they could be more thorough so that you really get into it, and really understand the papers. And then I know….now you present one paper each…but I also think it could work well if one got would be some kind of opponent…. where you got assigned to another student's paper.. where e.g. Lise has to present a paper where I am opponent....I do not have to present the paper, but I have read it and noted down some critical questions, so I am responsible for providing something or generate a discussion so that all can participate…..otherwise most people choose to focus on the one paper they are presenting". "Perhaps some questions from the teacher that has selected the papers".* Student 1 further emphasized that one possible improvement for the course could be the teacher providing some guiding questions for the selected papers for the students not to feel completely lost.

Student 2:

1. Is the amount of time spend on preparing for classes appropriate? (*less time used than described in the course description*)
    a. If not, then how should the workload balance be changed?

2. Is the academic level of the course appropriate? (*Yes, appropriate and relevant*)

3. How do you find that the different teaching sessions relate to each other given the number of different lecturers? *"I do not really remember the connections, only when they were talking about the same model organism…and then they did switch at some point, but I did not really notice". "I think it is more separate entities, but I can also see a small connection".*

4. Would the course improve from having a short re-cap of the previous lecture at the beginning of the class?

5. Is the motivation to prepare for class sufficient in the absence of grades? *"I do not think so, because you do not really have to read the papers, there's no…. no one is going to ask you directly if you have a question, and also yeah there is no exam and you are not asked any questions during the lecture it is not really that motivating, I feel like… at all". "Right now they are asking all students to prepare 3 questions for each lecture, but when they are not asking directly for the questions, they are only reaching the students that are interested in reading, so I feel like they should either choose some figures that people could present and then everybody had a chance or, I don't know, were forced to go up and present this figure". "I noticed that some are not asking questions during any of the sessions, and I think there is a way to improve that".* So, if you were to suggest an exam at the end of module 1 and 2 what could be good way of doing it? *"I would not suggest an exam, I think it is a good way of doing it, but I would just force every student to be a part of the class every time so they are participating so that you feel like you have to read every paper for every class because then I think it is ok and appropriate amount of hours that you put into the class".* "So for instance asking them to send one question for each paper to the teacher before class and then go through some of them". *"Yes, and an exam would be to write a kind of review…"*

6. How do you estimate your learning outcome in this course (module 1 and 2) when comparing with courses that are graded? *"I think you are more critical to the papers, something you do not really learn in these more theoretical courses, so that is really good and something you cannot really learn on your own or read, yeah I think that is good".*

7. Do you consider that you as students get sufficient feedback in this course – from the teacher/peers? *"Yes, I think there is good feedback and that the teachers are very eager about the topics because they chose the topics themselves*

8. What were the most important knowledge/skills that you acquired during this course?

9. What is good about the course? Why? *And presentations are always good – there could be some more focus on the presentations, how to do a good presentation, for instance, when that is the only thing you have to do during the course. "It would be nice to have some more introduction to how to go through a paper when presenting".* So that could also be by providing more feedback when people give presentations about what could have been done differently? *"Yeah, maybe also an introduction, if people are not very used to doing presentations then maybe they do not know how to prioritize the different figures and if they should include the results or methods or discussions…it would nice to maybe have some more.*

10. What could be improved? *"I think there should be some more focus on the presentations, but there is feedback for every presentation, so it is ok. And either people should have the feeling that they are forced to read the papers before going into the lectures, because otherwise it is easy just not to do it, and then you can go through the whole course without readying you are not doing anything you are just participating in these three hour lectures each week and that is probably a bit too easy. I think it is ok without an exam, but doing the lectures there should be some more pressure on the students".*

B

Presentation guide

Dear students. Below we have provided some guidelines for how to present a scientific paper that you might find useful when preparing your presentation.

1. Provide background (1-3 slides)

Before you dive in to the data, spend a few minutes talking about the context of the paper: what is known in the field (use review articles (or relevant original data from the literature) as background material for explaining concepts)? What is the research question? Why did they choose to address it in this way? Explain how this paper tackles an unanswered question in the field. Make a point of stating the *hypothesis* or *main question* of the paper, so everyone understands the goal of the study. Although the audience has read the paper, they are not expected to have specific knowledge of the field, so it is important to provide sufficient background information.

2. Explain the logical progression of the work

Present the data as a logical series of questions and answers focusing on key findings and leaving out redundant data. A good paper will already have done the hard work for you: it will be organized carefully so that each figure answers a specific question and each new question builds on the answer from the previous figure. If you're having trouble grasping the flow of the paper, try writing up a brief outline of the main points. The titles of the section or figure legends are often a great guide here. Feel free to leave out parts of the figures that you think are unnecessary (or redundant), or pull extra data from the supplemental figures if it will help you explain the paper better. Use circles, boxes, and arrows to highlight important parts of figures. Analyze the robustness of the data, the methodology, and analyses used to address the key questions.

3. Sum up important conclusions

After you've finished explaining the details of the paper, conclude your presentation of the data with a list of significant findings. If you've made an outline of the paper as suggested above, you've already done the work. Every conclusion will tie in directly to proving the major conclusion of the paper; it should be clear at this point how the data answers the main question.

4. Provide a critique of the methods and significance

Finally, offer your peers an analysis of the quality of the paper. Talk about whether the methods and questions applied to this study were the right ones, and how they could have been improved. What are the pitfalls of the study? – if a particular experiment is not convincing or unambiguous then illustrate this. Identify the relevance of the overall results based on academic arguments.

C

Peer Feedback Guide

Why use peer feedback?

One of the obvious benefits of providing peer feedback is that it helps the Presenter/Author identify points that worked particularly well and points that could be improved. However, knowing how to give peer feedback is also a very useful skill to develop as most of us will be confronted with having to evaluate the work of colleagues at some point in the future. Another benefit of providing feedback on other's work, behavior or performances is that we learn how to use the evaluation criteria and standards objectively, so that we can apply them more easily to monitor our own work.

Below are some guidelines for how to provide peer feedback:

Guidelines for feedback (SPARK)

- **Specific:** Comments should refer to something specific (word, phrase, sentence or slide).
- **Prescriptive:** Prescriptive feedback offers a solution or strategy to improve the work.
- **Actionable:** When the feedback is read, it leaves the peer knowing what steps to take for improvement.
- **Referenced:** The feedback directly references the task criteria, requirements, or target skills.
- **Kind:** It's mandatory that all comments be framed in a kind, supportive and constructive way.