

Interesting Finding	Instructional Design	Opinion Type	Teacher 1	Teacher 2	Teacher 3
3% of the grade is class participation at the University of Virginia	Interactive Lecture	Pros	We try to include this in our lectures, sadly sometimes the explanations the teacher has to do run out so there is little time for this. I think this needs to be planned more carefully so there is enough time for it to add value.	If you remove the grade associated with this I would love it, designing our lectures in a way that we focus more on interactivity and having students be more active through the lecture rather than passively listening to what I am saying.	We try to do this during the lecture, sadly not very successfully. Removing the grade from the equation, I am in full support of doing this more often during lectures. I do note that this should be planned better during the lecture so that it gets enough time and focus during the lecture and that it is not rushed through. This allows students to reflect on ideas before revealing the correct answer which could help students understand the ideas better.
		Cons / difficulties	I think having this be a part of the grading is not something we would benefit from, as the ultimate goal we want to have is that students are motivated themselves to take part at learning activities such as this one.	I detest using grades as motivation for students in this way. A student would feel like they are being led into doing this which contradicts the work ethic we want our students to have.	I do not like the fact that students receive a grade for this, I would like it more for students to develop an intrinsic motivation where they are in control of their own learning process
Students of Stanford university go through pre-recorded lecture upon which the physical lecture builds	Flipped Instruction	Pros	I think this is extremely valuable, either you explain concepts and let students play around in the labs which is limited. Or you do it the other way around like it is being done here where you delve deeper with the students	We do this for the more advanced machine learning course where the lecture is already recorded and then you check throughout the lecture where students are stuck and expand from there. This works out very well for students in combination with interactivity in lectures.	I would be interested in knowing whether this is something students like, in that case this could make teaching certain difficult topics easier by breaking them into digestable pieces.
		Cons / difficulties	This could be tricky as some students might not take it seriously and watch the pre-recorded sessions. This is something that teachers need to prepare for from the first year.	Doing this in the first few years of the university career of students, they are not mature enough to follow the instructions by actually watching the material they are intended to watch pre lecture.	This could be difficult to do with a large group of students. From the perspective of students, it feels like the lecture is saying, you have to spend twice the amount of time for the lecture, being a session at home and a session at universities.
MIT has weekly quizzes to test the knowledge of students about previous weeks material, the results of these quizzes form 20% of the final grade	Prior Knowledge Assessment	Pros	This ties in very well with the research to reduce the misconceptions students get when being introduced to ML.	I do not have good experience with this to think what kind of questions to ask. I do find this very helpful to keep students engaged and up to date with the material. I still think this all depends on the quality of questions.	I like this approach, we are at the TU Delft introducing weekly multiple choice questions where students can test their knowledge of the previous weeks. I like the direct feedback that after doing these questions I as a student can immediately see how I did.
		Cons / difficulties	None	Making up the questions is a very tricky part.	I do not like the fact that it is used as a structural part of the course with grades, I think students should be motivated to do these without them being associated with a grade. It is important at some point during your bachelor to learn more and more that you are in charge of your progress.
MIT dedicates a session a week where teachers show students, in relatively small groups, how to go on about solving the homework assignments of the previous week	Modelled Teaching	Pros	If we would have a larger teaching staff this would be an interesting strategy to experiment with.	It would work if you are with a small groups of students and you can hold eye contact and semi personal level of communication. For example to spot out people who are spaced out.	I think we try to do this to some extent in the lecture, showing a process that I hope students will mimic. The difference being I do not expect students to be able to do what I do during the lecture. This is also interesting for the implementation aspects of the assignments.
		Cons / difficulties	This would be very resource intensive as we would need to split the students in smaller groups. This is accompanied by the need for more teachers which we do not have at the moment	This has the same issue with the size of students as doing a project. There will also be more overhead with some students wanting it to be recorded or wanting the answers to go on brightspace. Eventually very few people will show up and actually benefit from these sessions in my opinion.	None
40% of the final grade at Stanford university is a group project	Project based learning Cooperative learning Problem based learning Inquiry based learning	Pros	The project is currently a bonus so it is available for the students to do it but it is not obligatory. This is because for me it does have added value.	I love this approach, we used to have this for the previous machine learning course and I think students can learn a great deal while collaborating on such a project.	I think the project could be a good idea in case we had more time during the course which we do not.
		Cons / difficulties	I believe as labs are being done weekly, it involves cooperative learning and I think it is more effective than the project. We can also that not all students want to do labs or a project and I believe it is the students choice what their learning process is. Thus some students would rather do labs, some want to do the project and other do not need any. The important thing is that the learning goals are being met by the final exam	Due to the high increase of student numbers previous years this idea becomes more resource intensive and infeasible with our current teaching staff capacities. On the other hand, with the current number of students, even if we had more teachers it would still be difficult to apply as teachers need to be guided and also need to learn how to assess students doing this kind of projects. So this brings a lot of new overhead	Our course is currently more focussed on the concepts than on the applications. Looking at this learning goal, spending multiple weeks on this project is a mismatch. We could change the project for it to be more conceptual, this would feasibility concerns (checking the projects with the current number of teacher and student assistants)