



Theme 4 - Discussion and collaboration in higher education



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Structure of this theme

Learning objectives and knowledge clip

Does collaborative learning have a positive learning effect and what is needed for this?

Designing collaborative learning

Your assignment for this theme

A checklist for assessing the assignment for this theme

planning

Literature references

Knowledge clip for this theme

We take a different approach and watch an animation clip made with the Doodly app. With this you can develop animated drawings, add text, pictures and add a voice-over. In the next theme, we will tackle these types of tools to promote educational interaction and communication. In this knowledge clip, we immediately zoom in on a core problem in collaborative learning: there is no "collaboration". The keyword for a solution is immediately provided: the development of a 'script' that gives 'structure' to group work and collaborative learning.

Thema4 EIC EN



Learning objectives



Learning goals

- Explain that providing 'structure' is essential to guarantee successful collaboration.
- Develop a content and / or role script that supports collaboration in a group.
- Build in guarantees that both individual and group accountability is provided when working together.

Does collaborative learning have a positive impact on learning?



Introduction

We immediately start with a critical note about the often relocated 'group work'. We do that by inviting you to read the article by Allan (Allan, EG (2016). "I Hate Group Work!": Addressing Students' Concerns about Small-Group Learning. InSight: A Journal of Scholarly Teaching, 11 , 81-89). You can download the article yourself here: [ej1110139.pdf](#)

"I Hate Group Work!": Addressing Students' Concerns About Small-Group Learning

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This article identifies the strategies used by architecture professors and their undergraduate students to mitigate common issues that students raise about group work. Based on participant-observation, interviews with students and faculty, and analysis of instructional materials and student work, this IRB-approved ethnographic case study complicates the separation of collaborative, cooperative, and problem-based learning into distinct pedagogical models. Rather than viewing students' concerns as a form of resistance that can be avoided with the right approach to small-group learning, this article explores how the hybrid model operating in design studio pedagogy confronts the problems inherent in any form of group work.

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7 Reasons Why Every College Student Hates Group Assignments

You will find many blogs, websites and research articles that similarly raise concerns about group work. It is striking that not only teachers, but also students often express themselves negatively about group work. Just read <https://eduadvisor.my/articles/why-every-college-student-hates-group-assignments/> And to complete the picture, we invite you to watch the following video clip in which a teacher talks time after time about 'I hate working in groups'.

I Hate Working in Groups



Does collaborative learning have a positive learning effect? And what is needed for that?

Both from a theoretical and research perspective, collaborative learning potential is a very effective and even efficient way of learning. To do this, a number of conditions must be met. Take a look at the video clip below in which students get started. The group receives a chapter from a book that they must tackle together and process into a mind map that shows the core of the chapter in a structured way. Each individual student in the group reads a section of the chapter and then works out one "branch" of the mind map. After 30 minutes, each group member explains his / her part of the chapter to the others.

Mindmapping



Je kan je meteen even afvragen waarom deze aanpak potentieel succesvol is. Noteer alvast enkele ideeën:

-
-
-

Research on the integrated use of collaborative learning is clear.

The short introductory activity just a moment ago on mind mapping brings us closer to research on collaborative learning. What does the research say? Hattie (2012) summarizes in his book the results of 50,000 studies that look at what "works" in education. His meta-analysis is clear: collaborative learning clearly has a greater learning effect than individual learning. But he immediately emphasizes that this does mean that critical preconditions have been met. That is why we ask you to read pages 5-6 of the following research article: [coop-learning-returns-to-college.pdf](#)

Cooperative Learning Returns To College: What Evidence Is There That It Works?

By David W. Johnson, Roger T. Johnson, & Karl A. Smith*

"Individual commitment to a group effort: this is what makes a team work, a company work, a society work, and a civilization work"
--Vince Lombardi, Former Green Bay Packers Coach

So read pages 5-6 about "The Internal Dynamics That Make Cooperation Work" and then write down five ideas about the preconditions for group work:

.....
.....
.....
.....
.....

From this - and also other research - you learn that it is necessary to have a clear goal in mind (what should we do?), That both everyone individually and the group as a whole must be evaluated, that students have a need for structure in tackling the work in the group, that they need feedback on their approach in the group, in addition to feedback on the final product to be delivered, that it is best that the group itself evaluates their own work ... An erroneous assumption is also that students can work together. Wrong! Collaboration is a difficult competence that you have to learn. students therefore need support in the collaboration process.

The keyword that is used time and time again in the literature to initiate collaborative learning is: structure. In this theme we do this by offering scripts. We will elaborate on this in the next section.



Designing collaborative work and group work

In a first example of a script, we look at a group work in the context of a healthcare training. In this type of training, students do a lot of internships and they come into practical settings where they continuously tackle problems. In the example, students are continuously offered online problems for a longer period of time - in addition to their internship activities - that are based on a well-chosen case. To prevent students from tackling these problems too routinely and forgetting what they were offered in their courses with regard to theory, research, procedures, ethics, ... they do not just approach the group work in their own way. The teacher has developed two types of scripts in the approach to the case positions. In some case positions, the students work on the basis of substantive scripts. In other case positions, they work according to concrete roles that are usually encountered in the practice setting.


Role script: The teacher specifies - with a rotation - specific roles to each student: the role of pharmacist, the role of teacher, the role of researcher, the role of representative of a pharmaceutical company. When tackling a case, each student responds from his / her role. This kind of script is therefore based on substantively anchored roles. The 'pharmacist' will have to follow the correct role when, for example, checking a doctor's prescription. The role of 'teacher' means that the student continuously checks whether what others write is in line with what has been dealt with in the lessons. He / she therefore substantiates proposals for, approaches, definitions, procedures ... on the basis of concrete documents from theoretical and / or practical lessons. The 'researcher' searches the internet for additional information to inspire or substantiate the group approach. The 'trade representative' looks for alternative products and / or tools

that can be offered / sold in the concrete situation. An alternative approach with roles requires the students to take on the following roles: 'moderator', 'source researcher' (in the courses and on the internet), 'questioner' (continuously this student asks the other group members about what they represent) and the 'summarizer' (who continuously integrates everything that has been achieved so far into an ever-growing summary).

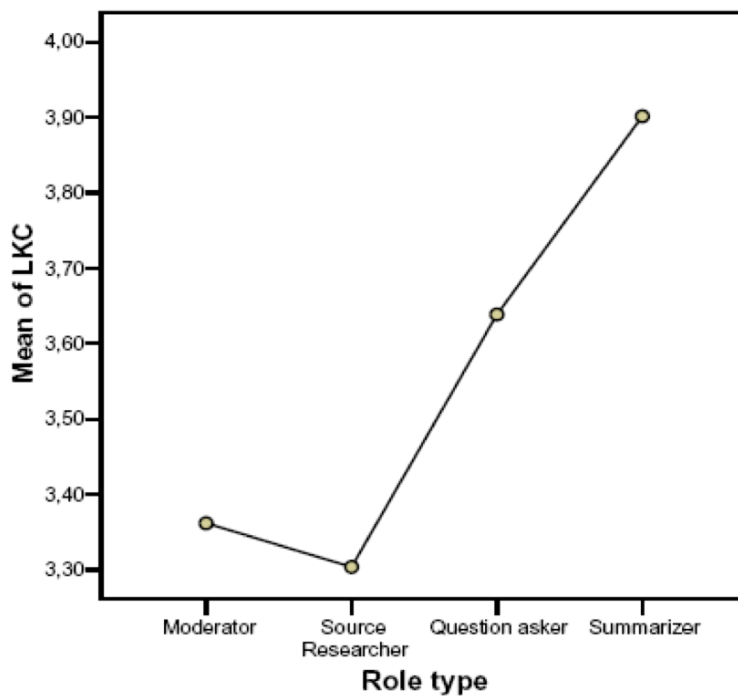
Content script: The emphasis is on tasks that are tackled when solving a problem; e.g., problem definition, putting forward hypotheses, propose a procedure for collecting / measuring, collecting data, summarizing results, discussion and writing conclusion.

In the example below you see a case that the students tackle. A 70-year-old man - Mr. Suikerman - enters a pharmacy with a prescription from his doctor. The man is a diabetes patient. Normally he will be given injections. but now he is given a prescription for an orally administered medicine.



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LKC Level of Knowledge Construction



Research in this approach to group work shows that students who work with roles integrate a much higher degree of knowledge into their group interactions. Secondly, the research also shows that not

everyone learns the same amount depending on the role. In the case studied here, you see that the degree of knowledge development is lowest among the student who takes on the role of moderator; while the student who takes on the role of 'questioner' and 'summarizer' clearly learns much more. This is obvious because the latter two follow very closely in terms of content what all other group members do. Based on this research result, the advice has been developed to 'rotate' the roles between group members; eg in a subsequent case.

More details about this research can be found in the article by [Timmers, S., Valcke, M., De Mil, K., & Baeyens, W. R. G. \(2008\). The impact of computer supported collaborative learning on internship outcomes of pharmacy students. Interactive Learning Environments, 16 \(2\), 131-141.](#)

Examples of scripts

To help you further on your way, we have developed a series of examples of scripts here. Pay attention; Depending on your task in this theme, it is not only about describing the scripts in general, but you will also have to work out a 'script map' for a script. The point is that students 'learn' how to approach things. Providing a clear task prescription helps with this.

Content scripts; think of the steps you take to tackle a problem, an assignment: Interview: determining the purpose of the interview, selection of persons to be interviewed, developing interview guidelines, taking notes during the interview, summarizing answers per interview, developing the conclusion for each interview. Photo collage for an analysis of the economy of a country: defining economic sectors, determining core concepts and processes for which photos are sought, looking up photos, developing a common thread for a photo exhibition, determining commentary text for each photo, developing brochure text for the exhibition ... Video clip (5 minutes) for a play by Hugo Claus (De Komedianten): reading play, reading play, selection of key actions for each act from the play, writing out short scenario, division of roles in group, set and costumes, recording video clip, editing video clip, working out beginning - and end credits ... Economic problem: analysis of market

demand, analysis of products on the market, development of prototype new product, market exploration of prototype, ...

Role-based scripts; think of the different people who take responsibility for tackling a problem with their view of a problem; think of roles that represent specific interests and are therefore often 'opposite' each other:

- Legal problem: judge, lawyer, prosecutor, defendant, accused ...
- Bank: bank clerk, director, customer, financier, collection agency
- Politics: mayor, secretary, municipal councilor majority party, councilor opposition party, reporter biased newspaper (fake news ;-)) ...
- ...

You can find an example of a role script via

<https://learningpowerkids.com/collaborative-learning/> and the de Bono thinking hat based roles that you often find in the literature (<https://fgc-consulting.fr/en/the-six-thinking-hats-of-de-bono/>).

Discussion Roles

Discussion roles help students to manage talk and encourage the development of certain speaking and listening skills.

Instigator

Starts the discussion or opens up a new topic for discussion

Will say:

I would like to start by saying ...
I think we should consider ...
We haven't yet talked about ...
Let's also think about ...

Prober

Digs deeper into the argument, asks for evidence or justification of ideas

Will say:

What do you think would be the effect of ...?
Why do you think ...?
Can you provide an example to support what you are saying?

Challen

Gives reason: presents an a

Will say:

I disagree with you
You mentioned X!
To challenge you:
I understand your
have you thought

Clarifier

Simplifies and makes things clearer by asking questions

Will say:

What do you mean when you say ...?
Can you explain a bit more about ...?
Does that mean ...?
Please can you clarify what you meant by ...?

Summariser

Identifies the main ideas from the discussion. This might be during the discussion, to help move the conversation forward, or at the end of the discussion.

Will say:

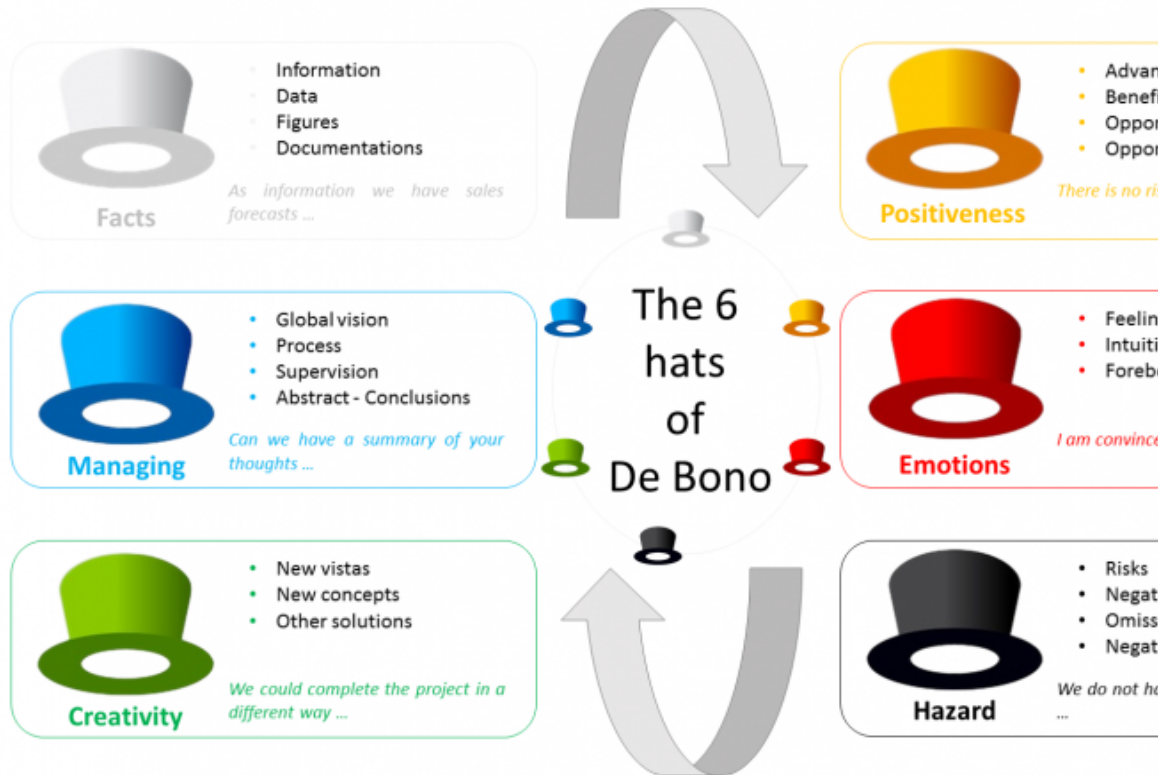
Overall, the main points were ...
The main ideas raised today were ...
Our discussion focused on ...
The three main things we talked about were ...

Builde

Develops, ad an idea

Will say:

I agree, and wo
Building on that
Linking to what



Also watch - for inspiration - the following video clip about 'roles in group work'. You will also find examples in Klascement (see eg <https://www.klascement.net/downloadbaar-lesmaterialen/94290/rollen-groepswerk-kaartjes/>).

Rollen in groepswork

Published with reusable license
November 30, 2014

Voortouw nemen
Overleg momenten

Het viel me hard op dat ik vaak de leiding nam en dat ik tot alles in de puntjes in orde wou hebben. Ik durfde niet altijd mijn eerlijke mening geven, schrik om iemand te kwetsen maar, buiten dit nam ik het vaak in handen.

Ik had zelf voorgesteld dat ik het weekschema verder ging uitwerken. Daarna gaf ik vaak een opmerking wat misschien beter zou zijn of wat er veranderd zou moeten worden. Ik hield ook bij wat we nog moesten afwerken en wat niet. Daarna besprak ik dit met mijn medestudenten van de groep.

Prezi

When using a script, it is important that the structure is clear for the st

Published: January 2005

Epistemic and social scripts in computer-supported collaborative learning

[Armin Weinberger](#)  [Bernhard Ertl](#), [Frank Fischer](#) & [Heinz Mandl](#)

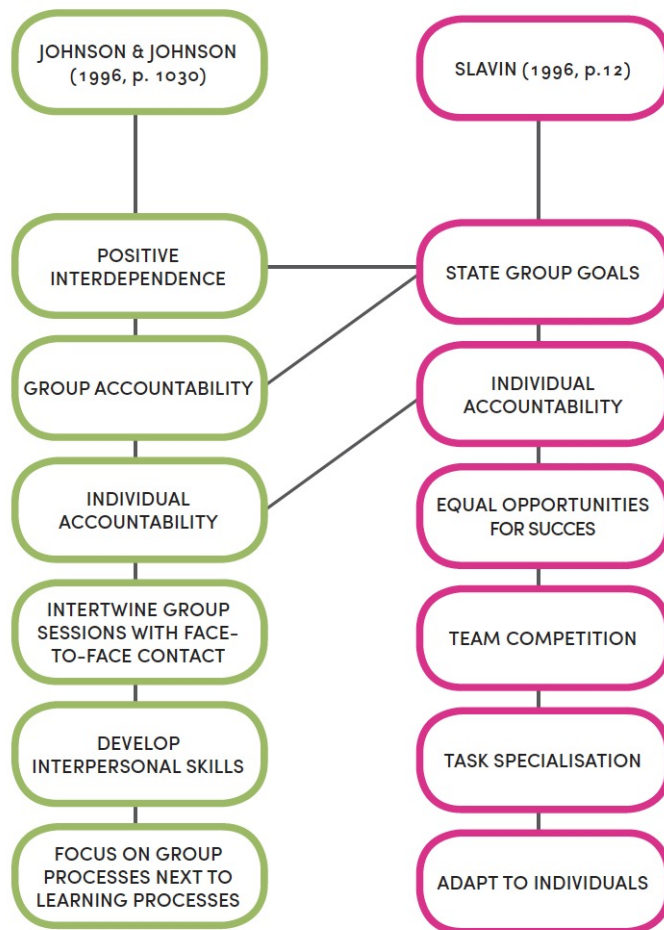
Instructional Science **33**, 1–30(2005) | [Cite this article](#)

1361 Accesses | 236 Citations | 6 Altmetric | [Metrics](#)

Abstract

Collaborative learning in computer-supported learning environments typically means that learners work on tasks together, discussing their individual perspectives via text-based media or videoconferencing, and consequently acquire knowledge. Collaborative learning, however, is often sub-optimal with respect to how learners work on the concepts that are supposed to be learned and how learners interact with each other. One possibility to improve collaborative learning environments is to conceptualize epistemic scripts, which specify how learners work on a given task, and social scripts, which structure how learners interact with each other. In this contribution, two studies will be reported that investigated the effects of epistemic and social scripts in a text-based computer-supported learning environment and in a videoconferencing learning environment in order to foster the individual acquisition of knowledge. In each study the factors 'epistemic script' and 'social script' have been independently varied in a 2×2 -factorial design. A total of 182 university students of educational science participated in these two studies. Results of both studies show that social scripts can be substantially beneficial with respect to the individual acquisition of knowledge, whereas epistemic scripts apparently do not always lead to the expected effects.

And the following design rules In addition to defining a content or role-based script, researchers also highlight the following design features of group work. We base this on the work of Johnson & Johnson (1996) and Slavin (1996). These researchers performed a meta-analysis of research on success factors of collaborative learning. Their publications are still seen as a milestone in research into teaching methods. The following figure shows how the researchers arrive at very similar conclusions (see Valcke, 2018, p. 492).

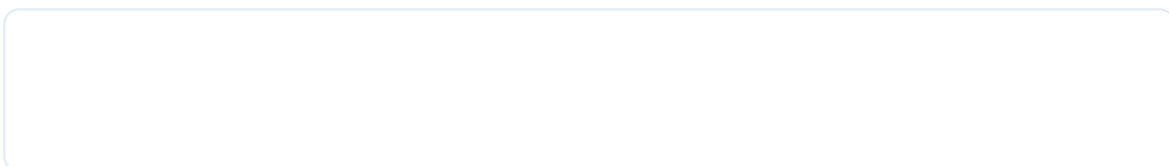
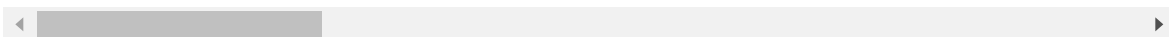


We summarize - a selection of - the guidelines:

- Provide a very clear and operational (observable) learning goal, so that the students know well what to deliver in the end. Slavin emphasizes this as 'group goals'.
- Positive interdependence means that collaboration is useful and that it does not merely lapse into distributing the work without interaction. This does not mean that students do everything together, but there must always be a phase in which

individual work is brought together in a larger puzzle, that it leads to further refinement and that the individual work, for example, is also assessed on quality together.

- 'Individual' and 'group accountability' means - as already emphasized - that there is an explanation of the teacher evaluation that emphasizes what is assessed based on the individual work and what is assessed based on the actual collaboration.
- The 'accountability' also means that the students themselves are responsible for the quality of their work. That is why many teachers also offer a rubric that students - independently and / or in groups - use to assess their work before delivering the final result. If you want to see examples of types of rubrics, please consult: <https://www.vernieuwenderwijs.nl/rubrics-klas-zo-ga-er-mee-aan-slag/> If you read this text, please use 'analytical rubrics' of course .
- 'Develop interpersonal skills' means that the instructions also help the students to develop the competence to work together. For example, the provision of a script when jointly developing a book review also leads to the development of this aspect of the competence in collaboration.
- 'Task specialization' refers straightforwardly to the provision of structure as described in the explanation of 'scripts'.
- 'Intertwine group sessions with face-to-face contact'. Much group work fails because the teacher has no insight into the actual activities. When as a teacher you do not have regular contact, do not give opportunities to ask questions or receive explanations, when no interim feedback is provided ... this often leads to 'failure' or less successful group work.
- Provide clear timing. Nothing is more harmful than making an appointment to deliver a group work 'within four weeks'. We bet that most groups will postpone their work and therefore start too late?



Assignment for the 'collaboration' theme

The assignment for this theme is obvious: apply all insights to work out a group assignment that leads to successful collaborative learning. To do this, start from your own subject or knowledge domain for which you have or will have educational responsibility. Pay attention to the following components when working out your assignment. Read what follows literally as the table of contents of the file that you will be uploading to your safe for this theme. So you upload a report with the following components:

1. Very clearly **define** the learning objective that the students achieve with the group assignment. Naturally, this learning objective is in line with the subject / course unit for which you are or will be responsible in the context of your course.
2. **Describe** the material that students need to tackle the group assignment. You can list this material yourself or refer to it if available online. Pupils can also track down or collect this material themselves, but then it must be clear what they have to collect. If necessary, give feedback about this (see timing below). Subject matter refers to texts, literature, websites, assignments ... The subject matter 'use' pupils to achieve learning objectives. They 'do' something with that subject matter. This verb is always central to the learning objective that you described in step 1. For example: Davina wants to work out a group assignment for the learning objective 'Compare the Belgian economy with that of another European country (of your choice). As subject matter she refers to chapters 2 and 3 of the handbook that the students have. It contains an analysis of the GNP (Gross National Product), the main economic sectors of the country, an analysis of the employment and unemployment rate and an analysis of investments in innovative sectors. For the description of the subject matter in another country, Davina refers to a website of the OECD where information can be found for the comparable components

described in the Belgian economy (https://www.europa-nu.nl/id/vgh3f38wycwi/organization_for_economic). It is not the intention that this is all attached. The most important thing is that it can be found.

3. **Describe** the way of working together. Use a 'script' for this. Pay attention to the substantive subject-related aspects of this script and to the collaboration elements so that the competence collaboration is also developed. Pay attention to the need for real collaboration during one or more phases of the group work. **Include script cards** that help students follow the script. You put the parts of the total script on the various script cards; eg one role per card or one step from the content script per card. We repeat that you can use a role-based script in which you specify people with their own tasks and responsibilities and then have those roles divided among the group members. You can also use a substantive script where the emphasis is on the consecutive steps or parts of the tasks that you have to perform to achieve the end goal.
4. Provide a clear **timing**: start date, intermediate date / dates for options for feedback (eg about their choice of course material if they have to do so; or about a preliminary first elaboration of a final report ...). Make sure that the timing structures the work in time so that 'procrastination' is avoided and that group members do not have to wait for each other. You know how annoying it is with the assignments for this course when fellow students do not deliver their work on time.
5. Indicate how and when the students **assess** their own work and that of the group. Provide a rubric they can apply for this self and peer evaluation activity. You can also think of providing a feedback dimension with the rubric (see the approach in this course). When drawing up your rubric, you can of course first fall back on the script cards (roles and steps) and on your own choices for quality criteria for the work that results from each role and step. A rubric is accompanied by a user instruction that helps students (individually and / or in groups) to know how and what to fill in (we also call this 'indicators' of quality). Avoid merely giving a score or letter; ensure that students provide substantive feedback during their assessment.

6. Determine how you as a teacher will assess the work.

Distinguish between the individual and group aspects in the assessment. Of course you can (partly) reuse the rubric, but you will have to supplement how you set off individual and group accountability.

Integrate all parts into one PDF file that you give the following name:

Name_collaboration.pdf

Take the checklist ([Feedback_collaboration_EN.docx](#)) and assess your work for completeness before loading it in your group safe.

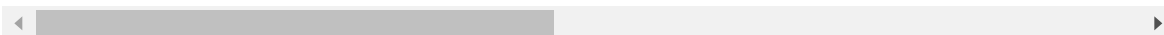
Checklist to evaluate each others' assignment



The design guidelines discussed earlier have been translated into a checklist for assessing collaborative learning proposals.

You can download here the checklist to be used to evaluate each others' work: [Feedback_collaboration_EN.docx](#)

Criterion	Feedback
	Participa
Definition of the learning objective	
Observable?	
Is attention paid to substantive and collaborative competences?	
Is group work really necessary to achieve the learning goal?	
Learning material	
Has been clearly described which subject matter students should use or collect themselves?	
Collaboration script	
Is a clear script provided that describes very concretely steps, phases, roles... for individual and / or the group?	
Timing	
Is a concrete timeline provided?	
Is sufficient attention for timely feedback provided? Do students know what to deliver, do, prepare for the feedback moment?	
Self and peer evaluation	
Has a rubric and a user instruction been provided so that students can assess and optimize	



- Deadline to upload your collaboration assignment clip: XXXX

- Deadline to upload your feedback and feed forward for one colleague: YYY

Build your feedback on the checklist:

[Feedback_collaboration_EN.docx](#)

- Deadline for uploading your feedback to the feedback having received: ZZZ

Good luck!

Literature references



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