



Study guide MARCH^{ET} module

Collaborative knowledge-building

Contents

Introduction	3
Learning objectives	3
Content of the module	4
Tools used in the module	5
Moderators	5
Appendix 1 Assignments	6
Appendix 2 Test session videoconferencing	14
Appendix 3 Protocol videoconferencing (vc) in Surfgroepen	16

Introduction

This study guide provides you with information on the MARCH^{ET} module *Collaborative Knowledge-Building*. In this module you will learn how you can use technology effectively in your teaching to promote collaborative knowledge-building by your students. In this study guide you will find general information on the module, e.g. learning objectives, an overview of the different parts of the module and corresponding assignments, time of investment and deadlines. The assignments are in the appendix.

Some facts about this module:

- It will take 12 weeks to complete.
- The total investment will be around 27 hours.
- You will work specifically on your own educational setting.
- You will work on the competencies designing and evaluating teaching.

This study guide is also available in the virtual learning environment (VLE) of this module. The VLE we use is SURFgroepen. Once you have registered for the module, you will receive an invitation to the SURFgroepen team site *MARCH^{ET} module Collaborative Knowledge-Building* where you can find all the relevant information and meet your moderator and fellow participants.

Learning objectives

Overall aim: Participants can make relevant choices for using technology within their own educational setting.

After completing the module, participants will be able to:

1. explain what collaborative knowledge-building is from a didactical point of view;
2. establish the added educational value of at least 2 tools;
3. make a relevant and effective choice for a tool;
4. redesign their course (or part of), taking into account the alignment between content, pedagogy and technology;
5. reflect and report on their own learning process;

Optional:

6. Implement and evaluate the redesigned product.

Content of the module

This module starts from an educational point of view and ends in teaching practice. The use of technology affects teaching, and thus the educational design of a learning situation. The module starts with your own input of an educational situation or problem that you share with your fellow participants. Next, you will explore the concept of collaborative knowledge-building (CKB) and tools that can support CKB. Based on your findings you will make an informed choice for a tool to improve the learning situation or to solve the didactical problem. Then you will redesign your course using the insight you have gained so far. You will implement the redesign in your educational setting and you will evaluate the effect with the help of an impact assessment.

The module consists of 4 online meetings and 13 assignments. By following the eight steps described below (one step may contain several assignments), you move along the module. The different assignments accumulate into a final redesign so you will be able to reuse, rethink and refine everything that you produce for the assignments that follow.

Step I Intake procedure

To register, you fill in the registration form available via the link on www.marchet.nl. After registration, one of the moderators will contact you by phone to complete the procedure. This will be followed by an invitation to the VLE.

Step II Preparation

In this module you will meet your colleagues online in 4 video conferencing sessions. To make sure your equipment works, we will first have a test session. Once this operates smoothly, you are ready to start the module. To orientate yourself on the module, also make sure to take a look at SURFgroepen and read the study guide.

Step III Orientation on CKB and the redesign

In this step you will learn more about collaborative knowledge-building and the tools that can support it. You will study relevant literature on the subject and there is ample time to practice the tools. For this module we pre-selected 6 tools: an annotation tool, mind maps, discussion boards, chat, blogs and wikis (but a wider selection is always possible!).

Step IV Making a relevant choice for a tool

Once you have finished your orientation on the subject and the tools, it is time to select the most effective tool for your teaching needs. You will discuss your choice with the moderator and the other participants.

Step V Redesigning your learning activities

During step 5 you will redesign your course or part of the learning activities of your course. In redesigning, you will take into account the alignment between content, didactics and technology. You will give and receive feedback from your fellow participants and the moderators.

You will also work on an evaluation instrument so that you can measure the effect of your redesigned product once you have implemented it.

Step VI Reflecting on the module

In this step you will reflect on your experiences in this module. What was the situation format at the start, what is the situation now and what have you learned from it, what would you like to share with your colleagues and future participants?

After this step, the group process ends. Steps 7 and 8 are optional but strongly recommended and will take place during and after the period in which you implement your redesigned product.

Step VII Implementation and evaluation (optional, but strongly recommended)

You will implement your redesigned product and evaluate the effects. This takes place during the period in which you teach your course.

Step VIII Presentation of the results: MARCH^{ET} conference (optional, but strongly recommended)

We will invite you to the MARCH^{ET} conference. During the conference you will share your experiences in the module and results of the evaluation with other teachers by giving and attending presentations about this subject.

Tools used in the module

During this module we use SURFgroepen as our virtual learning environment. Furthermore, we will use videoconferences, the annotation tool, discussion boards, document sharing, blogs and wikis. This way you will not only read about the tools, you will also experience from the 'student perspective' what it is like to actually work with some of these tools.

Videoconferences are used to discuss choices together, and to create a sense of community within the group. The annotation tool and discussion boards are used for processing and discussing literature and for peer feedback. In the document sharing folder you share files. You write and read blogs for personal reflections. Wikis are used to construct knowledge together.

Moderators

Jakko van der Pol
Centrum voor Nascholing Amsterdam
jakkovanderpol@hotmail.com
+31 6 18135660

Bas Bakker
Hogeschool van Amsterdam, University of Applied Sciences (HvA)
b.bakker@hva.nl
06 15029092

Appendix 1 Assignments

Assignment 0: Preparation

<i>Estimated workload</i>	<i>1 hour</i>
<i>Tools used</i>	<i>Videoconferencing in SURFgroepen</i>
<i>Goals</i>	<i>testing the equipment for videoconferencing</i>

Test session videoconferencing

In this session we test whether the equipment you need for a videoconferencing meeting works. You will also receive instructions on how you can share documents with your fellow participants and we will discuss a protocol for successful VC-meetings. See appendix 2 for more information.

Please read the protocol for successful VC-meetings. You can find the protocol in appendix 3.

Annotation tool

In this module we will use the Annotation tool for online discussion and peer feedback. Go to the [Annotation tool](#), and click on 'sign on' to create an account. In assignment 3 you will start working with the Annotation tool.

Orientation on the module

For an effective start of the module, please take a look at our [team site in SURFgroepen](#) (go to the tab of 'Group C') and read all the information provided in this study guide. If you have any questions, you can address these in the first videoconference.

Assignment 1: Introduction

<i>Estimated workload</i>	<i>2,5 hours (1 hour preparing and 1,5 hours videoconferencing)</i>
<i>Tools used</i>	<i>PowerPoint, document folder and videoconferencing</i>
<i>Goals</i>	<i>Introduction participants and the concept of Collaborative Knowledge-building (CKB)</i>

1a: Create a PowerPoint presentation in which you present yourself and the educational situation you want to redesign. Upload the presentation in the document folder below assignment 1.

In this assignment you will introduce yourself and the educational situation you would like to redesign during this module. Think about this educational situation. Do you already use the concept of CKB? Do you already use ICT tools in your course? Is there a clear problem or situation in your course you want to work on in this module? What's your reason to follow this module?

Create a PowerPoint presentation (max. 5 minutes, max. 5 slides) in which you pay attention to:

- Who are you, both personal and professional?
- Can you describe the educational situation you want to work on in this module?
- What is in your opinion the role of collaborative knowledge building in your educational situation/ problem?

Upload your presentation in the document folder of this assignment. The moderator will upload all the presentations into the videoconferencing room.

1b: Videoconference 1 (kick off meeting)

During the first videoconference you will have a chance to meet the other participants and the moderators for this module. During the session you will all introduce yourself and your educational contexts with the PowerPoint you made in assignment 1a. We will also address the structure and expectations of the Module.

Assignment 2: Orientation on CKB

Estimated workload: 4,5 hours (reading article and CKB doc: 2 hours, discussing it: 1,5 hours, and Videoconference: 1 hour)
Tools used: Annotation tool
Goal: A better understanding of (online) CKB

Read the background document on CKB and the article of Gerry Stahl

The background document briefly describes the potential of CKB, its different forms and why is it hard to realize. Stahl presents a model of the different elements of CKB.

2a: discuss Stahl’s article on CKB in the [Annotation tool](#) (> click on ‘Sign in’ to create your own account and then click to ‘become a member’). Then open the discussion page on Stahl’s article. You can now reply on a reading question or annotate your own passages in the text by drawing a selection around it with the left mouse button (press the left mouse button, hold & draw, let go).

This discussion is meant to get more ‘grip’ on the article of Stahl and the concept of CKB. We expect you to participate in the discussion several times over the week, for instance to help each other to translate important words or passages and to search for the main ‘message’ of the article. Feel free to address anything that you don’t understand; there is no such thing as a ‘stupid’ question!

In order to avoid confusion during the discussion (online discussion tends to leave more room for miscommunication than discussion face-to-face), we suggest you use the definitions of CKB as laid out in the background document on CKB. Also, the concrete example mentioned in this background document may shed more light on what Stahl’s model of collaborative knowledge construction may look like in practice.

Apart from posting your own questions and comments about parts of the article that you don’t fully understand or find essential, you can address the following issues:

- Which part of Stahl’s model of CKB do you believe to be the ‘driving force’ behind the construction or discovery of new knowledge?
- Compared to more ‘traditional’ forms of teaching, how does your role as a teacher change when implementing CKB?

<i>Criteria for contributions:</i>	
Quantity and timing	2 (sufficient) to 3 (good) messages per person over the week. Also mind the timing of your messages, so that the total amount of messages is nicely distributed over the week (it is important to maintain a good message flow, so that every posting will get a timely response).
Content-oriented	Messages are ‘on topic’ and aimed at processing the content of the subject

	matter.
Supported with argumentation	Always try to support your ideas or ‘hunches’ with argumentation and ‘evidence’. Sharing this argumentation evidence will allow you to collaboratively build and develop your understanding.
Relevant	Give others the type of useful (detailed and specific) feedback that you would also like to receive on your own comments.
Constructive	<p>‘Developing ideas’: try to ‘build’ upon each others’ ideas by reading them carefully and try to elaborate them.</p> <p>For instance, you can use the following activities:</p> <p><i>Extend</i> (‘I have a further thought...’)</p> <p><i>Paraphrase</i> (‘So, what you mean is ...’, ‘Is what you're trying to say...’)</p> <p><i>Refine</i> (‘I would make the distinction between... and... more clear by ...’)</p> <p><i>Complete</i> (‘True, and in addition... ’)</p> <p><i>Critique</i> (‘Aren't you missing this important point...?’, ‘Is that also true for...?’)</p>

2b: Videoconference

In this videoconference, we will wrap-up the definitions and discussion on CKB, evaluate the progress of the module thus far and look at the rest of the coming assignments.

Assignment 3: Tool orientation

Estimated workload: 4 hours

Tools used: Wiki

Goal: Which and how ICT tools can be used in CKB

3a: Read the information on the tools and practice with them

Now you have a clear vision on the situation you want to redesign, you can start exploring the tools. Read the information on the different tools. Maybe you also have your own examples (for example tools already used in your institute). Explore and practice with each of the tools (annotation tool, blogs, wikis, mind maps, chat, and discussion boards) and try get a sense of their strong and weak points.

For some hints on the strong and weak points of different tools, you can use this [‘Combitools’ overview](#).

3b: Add the advantages and disadvantages of the tools to the Group C wiki page (> click ‘edit’ in the top right corner).

Describe the advantages and disadvantages for CKB of the different tools that you read about and tested. These (dis)advantages can be general (about the practicality of the tool itself) or related to a specific educational situation.

Also keep in mind that you’re not only going to choose a general type of tool (for example a blog) but also the specific instance or “instrument” of it (for example Blogspot for “blog” or Blackboard for “online discussion”). We advise you to also try different instruments of a certain type of tool to compare their usability. Report the advantages and disadvantages of the different tools, both from theory as well as from your own experience in the wiki of group C. Complement or revise each others’ information to combine the WIKI to one integrated overview.

Assignment 4: Tool choice argumentation

Estimated workload: 3,5 hours (2 hour blog, 1,5 hours videoconference)

Tools used: Blog, videoconference

Goals: Choice for the tool that suits your setting best

6a: Go the blog of group C and add a post in which you describe your tool choice argumentation

Based on the wishes you have for your educational situation, your understanding of CKB, and your experiences with different tools, you will now choose the tool that you want to use in your redesigned course. We want you to describe the argumentation for your choice in a new blog post, addressing the following questions:

- Which tool best affords your students to engage in the desired learning activities that you formulated?
- Which requirements have to be met for your students to be able to effectively use this tool (infrastructure, hardware/ software, competences)?
- What are the strong and weak points of this tool (created by the offered functionality and usability)? For inspiration, you can use the [‘Combitools’ overview](#) but also rely on your own experience and common sense!
- How will you ensure that your students will also engage in these desired learning activities that are made possible by the tool? And how will you compensate for the weaknesses of your tool?

This last question will form the basis of your didactical implementation of the tool (containing aspects as task/ instruction, guidance, and evaluation), which you will further develop in assignment 5.

6b: Videoconference with a discussion on the tool choice argumentation

In assignment 6a you described your tool choice argumentation. In the videoconference you present to the moderator and the other participants the tool you have chosen and explain why.

Assignment 5: Course redesign

Estimated workload: 5 hours

Tools used: Step-by-step course design format, Annotation tool

Goal: Redesign

Redesign your course and upload your redesign in the annotation tool.

Now you have made your choice for a tool, you will start redesigning your course to integrate it. You have already gathered the basis for this redesign in the assignments. Following the step-by-step course design framework below will help you to create a logical path from your original goals to your final redesign.

Thus, you can use and refine your products of the previous assignments to fill out this step-by-step framework and create your final course design. The emphasis in this assignment lies with step 6, which is new and describes your didactical implementation. This implementation holds three key elements:

- Task/ Instruction
- Guidance
- Evaluation

In order to create a good didactical implementation in step 6, you also need to read the articles of Anderson and Van der Pol and use them in the argumentation for your didactical choices. For instance, make sure that you realize sufficient social, cognitive and teaching presence in your assignment(s) and try to maximize the chances that the assignment will be a success in your educational practice.

While redesigning your course to (better) implement online CKB, this might also introduce some additional organizational requirements. Therefore, in step 7 you will reflect on what these requirements may be and on whether in your situation they will be met.

Finally, save (or print) your course redesign as a PDF-file and upload it in [your peer feedback group](#) in the annotation tool.

Step-by-step course design

[NB We indicated the individual assignments where the steps refer to. See the original assignment pages for a more detailed description of the elements and questions involved in each step.]

Steps	
1	Describe the educational situation you want to redesign and explain why you want to implement CKB. [Assignments 1, 3, and 4]
2	Describe your learning objectives ¹ : What do you want students to know and be able to do and at the end? [Assignment 2]
3	Describe in which mental or practical learning activities you want your students to engage in. [Assignment 2]
4	Describe the tool you have chosen and explain why. Discuss not only the strengths but also the weaknesses of the tool. [Assignment 6]
5	Describe which infrastructural requirements have to be met for your students to be able to effectively use this tool and describe which organizational requirements have to be met in order to realize your chosen instructional format. Also identify any possible risks that these requirements are not met in the organizational context of your course and explain how you aim to minimize these risks. [Assignment 6]
6	Describe the didactical implementation of your tool. [New, building on assignment 6]

¹ For more information on writing learning objectives, see document Intended Learning Outcomes in the folder Course Information on SURFgroepen.

	<p>Incorporate at least your task/ instruction, guidance and evaluation of the assignment:</p> <ul style="list-style-type: none"> • Task/ Instruction Give the task and instruction that you aim to give your students and explain why. How will you ensure that your students will also engage in these desired learning activities that are made possible by the tool? How will your task motivate them? How will you compensate for the weaknesses of your tool? • Guidance Describe your own role during the assignment. How will you provide students with sufficient formative feedback? If relevant: How will you ensure that they are building the 'right' knowledge? • Evaluation Make a plan for the assessment of your assignment(s) and include your criteria. Will you assess your students continuously or only at the end of the course? Will you assess with an exam, an assignment, a presentation etc.? How does the assessment align with the learning objectives and the teaching and learning activities?
7	<p>Identify the organizational requirements that your intended didactical implementation introduces and check for your own situation whether these requirements are met.</p> <p>Some requirements that implementing CKB might impose are:</p> <ul style="list-style-type: none"> - The number of students, (Will you need a particular group size for CKB?) - The planning of your course (period, number of weeks, number of (virtual/face-to-face) contact moments, location, etc.) - The skills of the students, (Are they experienced in computer use or in CKB)?Your own skills, - Available resources (time of both students and teachers, money) - Technical facilities and support. (Does every student have access to computers/internet? Does every student have the right hardware (for example: functioning webcams and headsets?). - Do you have to get other lecturers, supervisors, tutors on board?

Assignment 6: Peer feedback

Estimated workload: 1 hour

Tools used: Annotation tool

Goal: Feedback on your redesign

Give feedback on the redesigned products of 2 other participants, using the annotation tool.

Give feedback on the redesigned products of the 2 other participants in [your peer feedback group](#) in the annotation tool, using the following questions:

- Does the redesign promote CKB for students? If so, in which way?
- Will it work as expected? Do you have comments on the feasibility?

- What is according to you the most positive aspect of this redesign?
- Which suggestions do you have to improve the redesign?

Also take advantage of the possibility for interaction in the annotation tool. For instance, don't only submit individual feedback, but to also comment on the feedback of others (do you agree? Can you elaborate or give more concrete suggestions for it?). For your own design, also make sure that the feedback you receive is understandable, relevant and usable for you by reacting on it if necessary (for instance by asking for clarification, argumentation or elaboration).

Assignment 7: Final redesign

Estimated workload: 2 hours
Tools used: Document library/blog
Goal: Final redesign

Make the final adjustments to your course design and upload it in the document library.

Your colleagues have provided your course design with feedback. Take good notice of the feedback you received. Which parts of the feedback make sense to you? What does this imply for your design? Adjust your redesign where you think this is appropriate and upload your final redesign in the Document library of this assignment.

Assignment 8: Preparing the evaluation

Estimated workload: 1 hour
Tools used: Document library
Goal: questionnaire for student evaluation

Develop a questionnaire to evaluate your redesign and upload it in the document library.

After implementation of your redesign (which may be planned for after the end of this Module) you will have to evaluate your students' experiences in order to find out whether your redesign was successful. In this assignment you will already develop a questionnaire that you will be able to use for that evaluation. To develop a questionnaire to evaluate your course, you can use this format. If you like, you can add the questions which are specific for your educational setting. Upload the questionnaire in the document library.

Assignment 9: Reflection on the module

Estimated workload: 2 hours (1 hour: blog post, 1hour: videoconference)
Used tools: Blog, videoconferencing
Goal: Reflection

9a. Add a post to the blog of Group C in which you describe your experiences with this module.

The group part of this module is almost over. Before you say goodbye to your colleagues it is good to stop and think for a moment what you have learned during this module. For this purpose we use a blog. Describe in your blog your personal learning process until now.

You can look back at the actions you have taken, the choices you have made, the reasons for these actions/choice and the effect it had on your education. How has this changed you as a teacher? You can also discuss the way you can use the knowledge/skills you have learned in the future.

Post your reflection into the blog of group C. In the blog, click on 'create a post' to add your reflection.

9b: Videoconference

During the final videoconference, the other participants and the moderators will look back at the module. This is your last chance to share and build knowledge together! What is your 'golden' tip with regards to using a tool/technology in teaching? What would you like to share with your fellow participants and with future participants..?

[This is the end of the required and collaborative part of the Module. We recommend you to also perform assignments 10 and 11, but you are free to plan these on your own.]

Assignment 10: Implementation and evaluation of the redesign.

Implementation

You have finished the group part module some time ago, but you are now at the point where you have to implement your redesign. Make a final check. Have you thought about everything? Is the equipment you need working? Are you ready?

Evaluation

Don't forget to ask your students to fill in the evaluation questionnaire you developed in assignment 10, after your redesigned course is completed.

Assignment 11: Reflection on the implementation of the redesign

Write a blog in which you reflect on the effects of your redesign

Your students have evaluated your course and you have thought about your own expectations. It is time for the final evaluation of the success of your redesign by describing the following aspects in a blog.

- the original educational setting
- the expectations with regard to the tool
- the expected results of the redesign
- the effect of the implementation of the redesign using the experiences of your students your personal experiences and possibly assessment results.

Post your reflection into the blog of Group C. In the blog, click on 'create a post' to add your reflection.

Appendix 2 Test session videoconferencing

Goal

In this session we test whether the equipment you need for a videoconferencing meeting works. You will also receive instructions on how you can share documents with your fellow participants and we will discuss a protocol for successful VC-meetings.

Time

The test session takes place March 31, 2011. Your moderator will be online from 9.30 until 11.00 am. You can log in at any time, but make sure to do so before 10.30 am. Once you are logged in, you will receive further instructions.

Preparation

Please read the protocol for successful VC-meetings. You can find the protocol in this document, after the technical instructions.

For the session you need a webcam and a headset.

Instructions on logging in

Entering the meeting

Log in at www.surfgroepen.nl and go to team site 'Module 1: Collaborative knowledge building'.

Click in the upper bar on the tab of your group.



Click on the webconferencing icon on the right side of your screen.



(be sure to have your popup-blocker disabled for this site)

You will now be asked to log in again.

Note: When using Adobe Connect for the first time on a PC, you will be asked to install an Adobe Acrobat Connect plug-in. Please, install the plug-in so to make sharing possible.

Activating camera and sound

The webcam and the microphone are inactive (default) and must still be activated.

To activate your camera and microphone, click the Start my camera and voice-button in the Camera and Voice window.

Note: Before activating the camera and microphone it is important to configure the settings for optimal image and sound during the session.

To configure the settings, click Menu *Meeting*, *Manage My Setting* and choose *Audio Setup Wizard* and/or *Select Camera* and carry out the on-screen instructions.

A notice now appears that surfgroepen.nl is requesting access to your camera and microphone. Click to *Allow*.

The camera will now be activated.

To avoid having to repeat these actions, the settings can be saved.

To save the settings, right mouse click anywhere in the VC-room and click *Settings*.

Choose *Remember* to save the settings to the computer you are working on.

The microphone can be operated by pressing:

- Hands-free button (lock)
- Hold to Talk button (mic)

When the microphone is active a green bar underneath the buttons indicates the sound level. Also, behind the name in the *Attendee List* window a microphone will now be visible.

Sharing files and applications

More information on sharing files and applications can be found in the Quick Start Adobe Connect. You can find this document under Course Info in the folder 'Test session videoconferencing'. During the test session the moderator will instruct you further on this subject.



Appendix 3 Protocol videoconferencing (vc) in Surfgroepen

To make sure that a VC-meeting is conducted in the most effective way, we have developed the following protocol.

Protocol

- Everyone is on time in the online meeting space. This means that you will have to check beforehand whether your camera and audio works.
 - Check the sound of your computer. If necessary, go through the audio set up wizard again (upper bar: meeting, manage my settings, audio set up wizard)
 - Check your camera.
 - Check the role you have. Only the moderator is host, the other participants are presenters (upper bar: present, make me a presenter).
- The moderator prepares the meeting. This means that the moderator:
 - determines the lay-out of the VC
 - presents the agenda
 - uploads presentations (see 'sharing information')
- One of the presenters will be appointed as minutes writer. This person writes down the most important conclusions in the notes-field.
- At the start of the meeting the moderator will check the following things:
 - Check whether every participant can hear the other participants clearly. The participants might have to adapt the volume on their computer.
 - Check whether the meeting needs to be recorded (the moderator records).
- To make sure the conversation runs smoothly we make the following agreements:
 - When a person speaks, the others turn off their microphones (to avoid audio feedback and noise).
 - If you want to speak you turn on your mic. Wait for the speaker to notice and to give you the turn.
- Don't change the layout of your page, as this affects all participants. The moderator is the only one who modifies the lay out or the content of the page during the meeting.

Sharing information

- Before meetings participants e-mail their presentations to the moderator. The moderator will upload the presentations.

In case you want to videoconference with other participants, you can upload files in the following way:

- PowerPoint files can be uploaded and shared directly.
- Word, Excel, webpages etc. have to be converted in Macromedia Adobe Flashpaper. You can download this for free at:
<https://connect.surfgroepen.nl/admin/home/homepage/FlashPaper.exe>
- During the meetings you can share other programs/applications with 'Share Screen'. This way you share your computer screen with the other participants.