

# Report One

## Canvas Page Redesign

By Felipe Bermejo, ISAD 2020/2021

### **Abstract**

Karlstad University uses Canvas as their tool for learning management. However, just as every other software, it has some usability problems. Students from the university (including the author) have had some complaints about the program and expressed some of their frustrations. More specifically, some of the usability problems noted are how difficult changing the language is from a language you do not know, the complexity of the inbox, and some of the sections or placing of those. After that, a redesign of the page was made, followed by a pilot test and the final testing. The results of this test show that the new design is a success, and also gives some feedback for changes in the next iterations.

### **Introduction**

Canvas is the LMS (Learning Management System) chosen by Karlstad University to help teachers and students in their learning and evaluating process. Nevertheless, Canvas is not free from suffering usability problems and students have taken notice of this. One problem that a lot of exchange students have encountered was that when trying to change the language, they really struggled, since you must go through 3 different menus not understanding anything in the process. Another problem encountered was the placement of some sections, or their usefulness as a whole. For example, the groups could be integrated inside the “Courses”, while the “People” section could have a lot more uses than what it has currently. Finally, the last problem noted was that the messaging page should be simpler and more intuitive, as well as smoother.

### **Re-design of the left menu bar, message function, and People page**

The suggested design makes some little changes over some screens of Canvas and adds some functionality as well. The first notable change can be found on the menu bar to the left. The “Groups” section has been substituted with “People” and at the bottom of the bar we can now find a button that allows us to easily change between English and Swedish, the two most used languages for Canvas in Karlstad University.

The second change made was in the message box, where no intermediate steps before sending the email have been skipped, and the only thing for change is the person the message is destined to.

Finally, the last change made is the new “People” section. This section simply displays the people on the course. Additionally, a new feature has been implemented: an icon that will automatically send you to the message box, with the receiver being the person selected earlier. (See Appendix 1)

### **Motivation for changes**

Canvas has a lot of languages available. However, finding how to change the language can get really difficult, especially when people don’t understand the one they are using Canvas with. In Karlstad University the two main languages spoken are Swedish and English. Thus, we can make those two easily accessible, making less hard for non-Swedish speakers to find the specific language they want to use (in case they even want to use something different than English). Additionally, the messaging box needed to be simplified, since there are too many options that make the process slower than what it should be.

Apart from these changes, the “Groups” section was changed with the “People” one, because people felt like groups could be implemented into the “Course” section, while “People” was more important, being also a section that can hold a lot of potential to make a lot of processes smoother. One of those is going to the message box with the specified person selected.

## **Design of the experiment**

The experiment was conducted both online and presential at the Usability lab at Karlstad University. When selecting participants, one requirement was needed: that they do not speak Swedish. Rubin & Chisnell (2008, p.121) say that requirements can help you study and explain some actions a certain group of participants may make during the test. The reason this requirement was taken was to truly see the usefulness of the new way of changing language. A Swedish speaker would not change the language, because they would understand everything.

The steps of the experiments were:

1. Explain every step of the test to the participant.
2. Hand in the Information and Consent Form
3. Give the participant the questionnaire.
4. Explain the tasks of the test.
5. Check everything is ready before test starts.
6. Conduct the Test.
7. Finalize with a semi-structured interview.

## **Ethics and Participant's privacy**

Before the questionnaire was handed in, participants were given a consent form where they are informed of all the rights they have and where they consent the use of their data for this study (see Appendix 3). This is all made following the GDPR standard protocol. Additionally, the participant's data is always remained anonymously. It is of great importance to respect the privacy of every participant. Rubin & Chisnell also (2008, p. 151) talk about the importance of it, and how every data we collect should be only use for the matter it is collected. We should never use names, or share any of the data we gather, for example.

## **Background Questionnaire**

A background questionnaire was handed in before the test to gather some personal data of the participants that was considered relevant for the analysis of this experiment (see Appendix 2). As Rubin & Chisnell state (2008, p. 162), it was also helpful to confirm that the right people are the ones testing the product. This is especially true with the “Do you speak any Swedish” question, so that we confirm that they do not. Table 1 below shows the data collected from this questionnaire.

<b>ID</b>	<b>Age</b>	<b>Gender</b>	<b>Education Level</b>	<b>Computer Level</b>	<b>Used Canvas</b>	<b>Knows Swedish</b>	<b>Signed</b>
T1	21	M	Undergraduate	Normal	Yes	No	Yes
T2	18	F	Bachelor	Normal	No	No	Yes
T3	21	M	Bachelor	Excellent	No	No	Yes
T4	19	F	Bachelor	Good	No	No	Yes
T5	19	M	Bachelor	Excellent	No	No	Yes

**Table 1** – Data of the Background Questionnaire done to participants

### **Scenario and Tasks**

The test starts at the “Dashboard” section in Swedish. They have access to some of the sections of the page. In this setting the participants have to:

1. Send a message to Jessica Comte.
2. Send a message to Mikaela Målström, using the feature on the “People” section.

### **Semi-structured interview**

A semi-structured interview was made right after the test. This was really helpful to know some of the feelings the participants had with the design, the things they liked and disliked, if the new features were good enough in their eyes, and even to gather some new suggestions for further iterations of the design.

### **Compensation to the participants**

The participants were compensated for their time and effort conducting the test. All participants were served with a drink to have while they were having the test and given some sweets and chocolate after everything was set and done. Rubin & Chisnell (2008, p. 150) also talk about the importance of compensating participants and we took some of their suggestions when coming up with the final compensation (for example, not having to use monetary compensation, but rather something that the test participants would like or appreciate).

### **Pilot Test**

Before any test was formally conducted, some pilot testing was done. The reason for this to be made was to find if everything in the test was working accordingly, either the program itself, the tasks or the questionnaire. Two people were in charge of the pilot testing (see table 2) . It consisted on going through every step of the test as if it was a real test, then go back to the program to see if we could find any more errors than the ones possibly encountered during the tasks, and finally give some thoughts to see if we could be adding or editing something before the test.

<b>ID</b>	<b>Age</b>	<b>Gender</b>	<b>Education Level</b>	<b>Computer Level</b>	<b>Used Canvas</b>	<b>Knows Swedish</b>	<b>Signed</b>
P1	21	M	Undergraduate	Excellent	No	No	Yes
P2	20	F	Undergraduate	Normal	Yes	No	Yes

**Table 2** – Information of the Pilot Testers

We did find some errors in the Ozlab design while conducting the test and going through the screens, which were all corrected before the “real” testing. The tasks and the questionnaire remained intact. The only important change was to time the test, as it was decided it could be useful information for analysis and conclusion.

### **Result of the Test**

All the test participants were able to complete the two tasks. Every one of the was made with a computer. No kind of recording was taken, as it was considered that with the data collected, the interviews and memory was more than enough to pinpoint the positive and negative aspects of the design. Below, on table 3, we have a summary of the comments of the participants on the semi-structured interview, along with the data collected during the test.

<b>ID</b>	<b>Date</b>	<b>First Message</b>	<b>Total Time</b>	<b>Changed to English</b>	<b>Comments</b>
T1	05-03-2021	6:46	7:47	Yes	Had trouble writing message from the inbox. Language easier to change, but no preference over original canvas. New messaging system is better, more direct. People section is just okay. Does not know what lots of things in original Canvas are for
T2	06-03-2021	2:46	3:34	Yes	People section was intuitive and important. Messages are good, but difficult to find. Would change some of the colors of the interface. Language easy to change.
T3	06-03-2021	1:04	1:45	Yes	Language was very easy to change but could be placed somewhere else. Finds people section necessary. Would change the inbox and messaging system to a chat.
T4	06-03-2021	1:02	1:39	Yes	Aesthetic of the page is not very pleasing. Language easy to change but could be placed on another place. People section is not that important and could be changed for an announcement one. New icon very useful.
T5	07-03-2021	1:05	1:56	Yes	Simple interface but needs something else. People section is important but would change the name. New message on inbox should be clearer. Thinks discussions could be a menu bar section.

**Table 3** – Data and comments of the participants after the test

### **Noted Issues of the Test/Design**

- The Inbox was “difficult” to find. All the participants went first to the people section than to the “Inbox”.
- Some questions of the questionnaire could lead up to some confusion.
- Too little functionality in the prototype sometimes confused one or two participants.

## **Analysis and Conclusions**

The experiment gives us some interesting data and feedback for analysis and conclude looking for what could be made in the next iteration. Most participants took more time looking for the inbox than using people, showing that the latter was much more intuitive than the other one. There seems no correlation on the level of computer knowledge and the difficulty of finding everything or knowing how to use it (with the exception of the first participant, which also was a rare case, taking into account he also had used Canvas before).

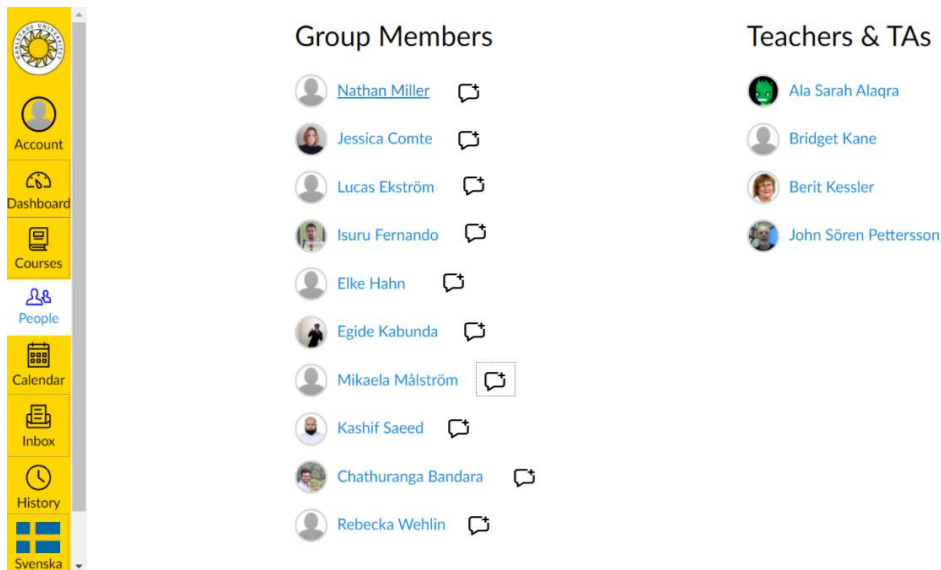
The changes this design all have brought up to the table seem positive. Most of the people like the “People” section and the new feature to send messages directly. Changing the language was very easy and every participant made it without having to be asked for it. Additionally, the feedback got from the testing was mostly positive as well, only suggesting little changes to the new design features. However, we got more negative feedback with things regarding the original design along with some suggestions to improve both the original and the new design. Some of them were for example, changing the placements of some buttons or sections, changing the images, logos and names of the sections, adding new sections, changing colors and maybe adding new features like a schedule on the calendar or instead of it.

All of this will be taken into account for the new design for the next iteration of the report.

## **References**

1. Rubin, J. & Chisnell, D. *Handbook of Usability Testing: How to plan, design and conduct effective tests*. Second Edition. Indianapolis, Wiley Publishing.

## Appendix 01 – New Design of Canvas



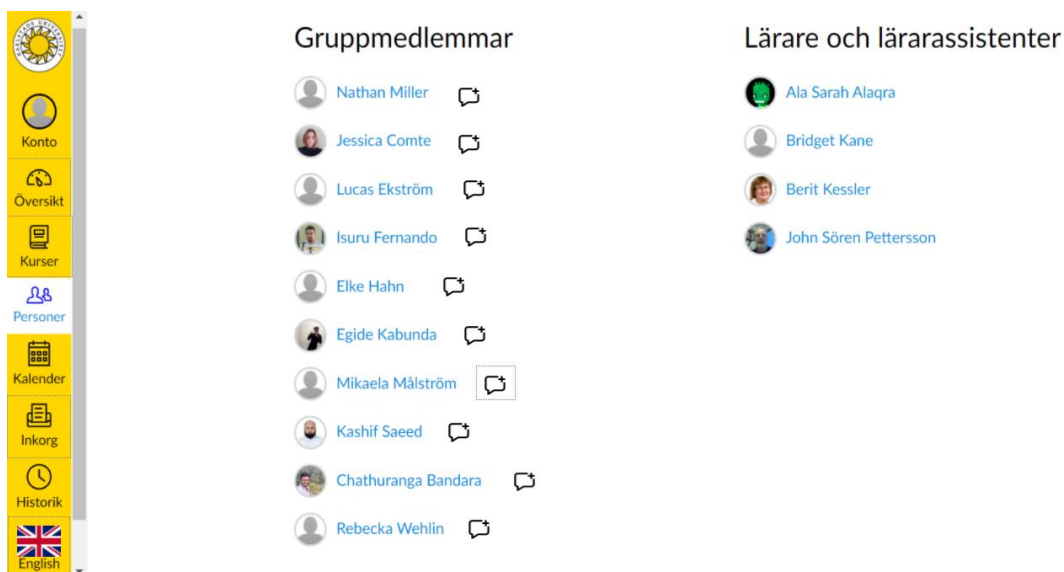
**Group Members**

- Nathan Miller
- Jessica Comte
- Lucas Ekström
- Isuru Fernando
- Elke Hahn
- Egide Kabunda
- Mikaela Målström
- Kashif Saeed
- Chathuranga Bandara
- Rebecka Wehlin

**Teachers & TAs**

- Ala Sarah Alaqra
- Bridget Kane
- Berit Kessler
- John Sören Pettersson

### People section in English



**Gruppmedlemmar**

- Nathan Miller
- Jessica Comte
- Lucas Ekström
- Isuru Fernando
- Elke Hahn
- Egide Kabunda
- Mikaela Målström
- Kashif Saeed
- Chathuranga Bandara
- Rebecka Wehlin

**Lärare och lärarassistenter**

- Ala Sarah Alaqra
- Bridget Kane
- Berit Kessler
- John Sören Pettersson

### People Section in Swedish



Konto

Översikt

Kurser

Personer

Kalender

Inkorg

Historik

English

## Översikt

I dag +

**Början av din att göra-historik**  
Du har bläddrat tillbaka till din allra första att göra-uppgift!

FREDAG  
januari 15, 2021

ISAD15, VT21 MODELS AND EXPERIMENTAL METHODS IN MULTIMEDIA DEVELOPMENT	> Visa 1 slutfört objekt
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MÅNDAG  
januari 18, 2021

### Dashboard Section in Swedish

Account

Dashboard

Courses

People

Calendar

Inbox

History

Svenska

## Dashboard

Today +

**Beginning of Your To-Do History**  
You've scrolled back to your very first To-Do!

FRIDAY  
January 15, 2021

ISAD15, VT21 MODELS AND EXPERIMENTAL METHODS IN MULTIMEDIA DEVELOPMENT	<input checked="" type="checkbox"/>	ISAD15, VT21 MODELS AND EXPERIMENTAL METHODS IN MULTIMEDIA DEVELOPMENT 37698 ANNOUNCEMENT <a href="#">Let's start by planning....</a>	5:04 PM
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MONDAY

### Dashboard Section in English

ISAD15 Essays 2021 1

ISAD15 Essays 2021 1

Compose Message

Course ISAD15 Essays 2021 1

To Nathan Miller

Subject

☐ Send an individual message to each recipient

Cancel Send

Message board

**Appendix 02 – Background Questionnaire****PRE-TEST QUESTIONNAIRE**

**Participant Nr:**

**Age:** \_\_\_\_\_

**Gender:** ☐ Male ☐ Female ☐ Non-Binary ☐ Other

**What is your current education level?**

☐ Undergraduate

☐ Bachelor Student

☐ Master Student

☐ Other

**What is your level with computers?**

☐ Bad ☐ Normal ☐ Good ☐ Excellent

**Have you ever used Canvas?**

☐ Yes

☐ No

**Do you know any Swedish?**

☐ Yes

☐ No

**Appendix 03 – Information and Consent form**

# INFORMATION AND CONSENT FORM

## For Canvas Usability Redesign Testing

Please, note that:

All the personal data requested will be processed in accordance with your informed consent. The participation in this usability test is voluntary and you can always revoke your consent at any time with no need to give any reason or explanation.

The data gathered in this study will only be retained until it has received a passing grade and it will be only used to improve the proposed Canvas redesign (a system used in Karlstad University). All information will be strictly confidential, and you will remain anonymous.

Karlstad University is the personal data controller. According to *Personuppgiftslagen* (The General Data Protection Regulation, GDPR, in effect since May 25, 2018), you have the right to access all your data that has been collected without cost, and if needed have any errors corrected. The contact information of the data protection officer at Karlstad University is [dpo@kau.se](mailto:dpo@kau.se).

In this usability study you will have to fill in a questionnaire with some personal information, perform some tasks with the ~~Qzlab~~ program and participate on a short interview about the prototype and the tasks.

I have been informed about this study and consent to my participation. I understand that my participation is voluntary, and that data will be processed anonymously. Therefore, I consent to Karlstad University processing my personal data in accordance to GDPR and the information provided.

Date:

Signature:

# Report Two

## Canvas Page Redesign

By Felipe Bermejo, ISAD 2020/2021

### **Abstract**

After the first iteration of the Canvas redesign project, some changes have been made in order to improve both the design and the experiment. The thinking aloud method was introduced in the experiment for example, and new sections have been added in the new redesign of the page, such as “News” or “Forum”. Due to this, the tasks and post-test interview have also changed to get feedback more directed to this new design. The results show that the new changes to the experiment have been successful and that every iteration the page is improving. However, there are still necessary some changes to fully reach the aim of the redesign.

### **Introduction**

Aiming to improve the Canvas page (the LMS used in Karlstad University) interaction and usability, a first redesign of it was made in the first iteration of the project. The first design consisted on changing the “Groups” section and changing it to “People”, also making a feature available on the section which lets the user send a message directly to the specified person through an icon. Another big change made in the design was to create a button to change the language from Swedish to English directly, making it very easy to change the language, which was a problem the original page had. The last change made was to simplify the message box menu, as it was too complicated.

This design was tested, and feedback was collected, as well as multiple suggestions and ideas on how to improve the page. With all that information as a helping tool, the design of the page

has been updated. In this iteration we will see the new design along with the new experiment to see if it is a success or not and collect useful data for the next iteration.

### **Redesign of the menu bar: “News”, “Forum” and “Messages”**

The changes made in the first iteration have been kept as they were, since they were greatly accepted by the test users. One little tweak has been made on the “Inbox” section, and that is that the name and the icon on the section on the menu bar. The section is now called “Messages” and has an icon of an envelope.

The biggest changes of this iteration have been the two new sections: “News” and “Forum”. News is a section that displays all the recent announcements of the courses. You can click on the announcement and it will send you to the full message. The Forum section is the same as the discussion section inside “Courses”. With this change is quicker to access and to use now, which can prove to be pretty useful. The interface for creating a new discussion has also been slightly altered, as the “Save” and “Cancel” buttons were put on a place clearly more visible. See Appendix 01 for screenshots of the design.

### **Motivation for changes**

The changes made on this iteration were made mostly because a lot of the users found the “Dashboard” and “History” sections confusing or not very useful whatsoever. Some people also complained about how some icons or names were not very intuitive. This was specially the case with the “Inbox” section in which various users and test participants struggled to send a new message because they did not find intuitive the name of that section and the icon it had.

The new icon and name for the “Messages” section was made so the problem just described does not happen as often. “News” and “Forum” were suggestions some of the test participants had after making the test in the semi-structured interview. This mixed with all those claims about “Dashboard” and “History” was what motivated this change. The fact that icons for

announcements, messages and discussions existed only made this change make even more sense.

### **Design of the Experiment**

This time, the experiment was conducted online on its totality. This was better to find the appropriate participants and also due to the pandemic going on at the moment. As the last time, the requirement for the participants (Rubin & Chisnell, 2008, p. 121) was not being able to speak Swedish. It is still considered necessary to see how the change of language works and could be also interesting for other type of conclusions.

There have been some changes in the experiment compared to the one in the first iteration. More tasks have been introduced and the interview questions have been updated as well. New to this experiment is the orientation script (Rubin & Chisnell, 2008, p. 155) and the Thinking Aloud technique (Rubin & Chisnell, 2008, p. 204). This two will help to inform and introduce the experiment better to the participants and to get better data for analysis and conclusions.

The steps on this iteration were:

1. Explain every step of the experiment to the participant
2. Give the information and consent form
3. Give the participant the background questionnaire
4. Explain and show an example of the Thinking Aloud technique
5. Explain the tasks of the test
6. Conduct the Test
7. Finalize with a semi-structured interview

### **Orientation Script**

Rubin & Chisnell (2008, p.155) introduce the orientation script as a communication tool that describes what will happen during a test and that sets the tone of the session in the minds of the participants. It is also declared helpful for multiple number of reasons, for example making sure you give the same amount of information to every participant or making the users more comfortable and informed of what they will be doing. It was seen as a very useful tool to introduce the test as a whole so a orientation script was written and then followed during the sessions. See Appendix 05 for the orientation script used in these sessions.

### **Ethics and participant's privacy**

Just as the last time, before the background questionnaire was given, all the participants were asked to sign the consent form (Appendix 03). This consent form is signed so that the participants agree that they have been informed of all the rights they have and that their participation is always voluntary, allowing as well to have some of their data asked in the questionnaire only for the duration and purpose of this study. This is all made in accordance with the GDPR standard protocol. Additionally, the participant data was always kept anonymous and private (Rubin & Chisnell, 2008, p.151). We never use names or share the data collected.

### **Background Questionnaire**

After the consent form, the background questionnaire (Rubin & Chisnell, 2008, p. 162) was given. This background questionnaire was for the most part the same as the last iteration (Appendix 02), as no new data was considered necessary from the participants for analysis purposes. It was also good to check that everyone followed the requirement, just as the last time. We asked for age, gender, studies, level with computers, to know if they have used canvas or whether they know Swedish or not. The only change that happened is that the answers in the



“Level of Computer” question were changed to more concrete ones as the previous ones could be considered ambiguous. On Table 1 below we used a shortened version of this answer.

<b>ID</b>	<b>Age</b>	<b>Gender</b>	<b>Education Level</b>	<b>Computer Level</b>	<b>Used Canvas</b>	<b>Knows Swedish</b>	<b>Signed</b>
T1	19	M	Bachelor	Good	No	No	Yes
T2	20	M	Bachelor	Normal	No	No	Yes
T3	20	M	Bachelor	Good	No	No	Yes
T4	21	M	Bachelor	Excellent	No	No	Yes
T5	19	M	Bachelor	Normal	No	No	Yes

**Table 1** – Data of the Background Questionnaire done to participants

### **Thinking Aloud technique**

The thinking aloud technique was introduced in this experiment as a tool to help with the analysis of the design and usability. Rubin & Chisnell (2008, p. 204) say thinking aloud helps tremendously in the right situations, as you are able to capture what the participants think during the process of the test. It can also help you spot some undesired behaviors during the test or even some misconceptions the participants and users may have with the design. This comes with the risk of having some participants feel distracted with it or work slower.

We explained and showed an example to participants the technique so that the participants understand what they have to do easily. After that, we tell the participants not to force or overdo the technique and to try to be as natural as they can, even if this means they barely comment anything. This is made to avoid the risks shown above and have the best testing possible at the same time.

### **Scenario and Tasks**

In this iteration, the tasks from the last iteration are included on top of two new additional tasks. The user starts at the “Course” section in Swedish this time instead of the “Dashboard”. From here, the participants are asked to:

1. Check the announcement made by the teacher about the testing
2. Follow the tasks in the announcement, this means:
  - a. Send a message to Jessica Comte
  - b. Send a message to Mikaela Malström via the “People” section
  - c. Create a new discussion

### **Semi-structured interview**

Just as the last time, after the testing was made, the participants were asked some questions in a semi-structured interview. Most of the questions from the previous iteration were kept, but there were some new questions as well to see what the users thought of the new sections and features. This was also a very good way to ask for suggestions and gather ideas for the next iteration. See Appendix 04 for the questions of this interview.

### **Compensation to participants**

Because of the circumstances of making the testing online, the participants could not be compensated directly at the time of the test. We promised an invitation of any kind of thing when possible: a drink, some beers, a cinema ticket and things like that. Rubin & Chisnell (2008, p. 150) say that it is customary to compensate the participants for their hard work and help, and we did all the possible to give some compensation to the participants when the circumstances allow it to happen.

### **Pilot Test**

Just as the last iteration, one pilot test was conducted to check that both the design and the experiment work as expected and that when making the real test no negative surprises appear. The pilot test remained the same as the last one since the pilot test made previously showed very helpful as it spotted some errors along the way and helped to come up with some little tweaks in the experiment. This pilot test consists in just going through the experiment just as a

normal participant would, and then look thoroughly in the design to search for any errors after the test and discuss any other improvements that could be made in the experiment (for example in the questionnaire or the interview questions).

<b>ID</b>	<b>Age</b>	<b>Gender</b>	<b>Education Level</b>	<b>Computer Level</b>	<b>Used Canvas</b>	<b>Knows Swedish</b>	<b>Signed</b>
P3	21	M	Bachelor	Excellent	No	No	Yes

**Table 2** – Information of the Pilot Testers

The pilot test was made by one of the previous test participants. It helped spot one error in a button where it sent you to a scene it should not. It was obviously corrected before the test. However, nothing more changed after the pilot test as everything was considered to be good enough with no need to improve.

### **Result of the Test**

All the participants completed the tasks presented to them in a successful way. The testing remained on a computer and as the last time, no recorded was considered to be necessary, as the notes on the semi-structured interview as well as the ones on the thinking aloud process serve as very good and enough for analysis.

On the Table 3 below we have some information about the test of each participant. We have the date, the times for when they reached the announcement (Time 1), when they sent both messages (Time 2) and the final time. We also have whether they changed the language to English or not.

<b>ID</b>	<b>Date</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Total Time</b>	<b>Changed to English</b>
T6	14-03-2021	1:19	3:30	4:28	Yes
T7	14-03-2021	1:56	6:16	7:12	No
T8	15-03-2021	1:32	3:16	4:51	Yes
T9	15-03-2021	0:39	2:13	2:52	Yes
T10	15-03-2021	0:30	1:41	2:06	No

**Table 3** – Data of the participants during the test

## Comments and notes of the participants

Now are some of the notes taken during the test, or after it in the semi-structured interview. It summarizes the experience of each participant overall, their comments about possible difficulties they faced during the test and positive feedback along with negative one.

**T6:** He changed to English by accident. According to him, to see the Swedish flag when it is on Swedish would be easier to change language, or maybe even have a “Language” section as well. He does not consider the “People” section necessary and would probably blend it in with the “Message” section. However, he would prefer to use the icon on “People” because he thinks the icon for new message on the “Message” section is not fluid or intuitive.

**T7:** This participant had problems finding how to message Jessica Comte on the “Message” section. He also finds the message section a bit unnecessary these days, as most students communicate on other platforms. Really likes and prefers the “People” section over the message one, he finds People really necessary and intuitive. Did not change the language because everything was considered intuitive enough and because he thinks the flags should be the other way round. Likes News and Forum, but the second one could be not very useful these days for the same reason as messages.

**T8:** Thought the language was very easy to change and would like more options available. He would like to be able to send messages to Teachers in the “People” section. Considers “News” a key section and extremely important, as the students need to see quick what the teachers announce. Forum although not as important, if used can be also a very important section to have there.

**T9:** He found the page really intuitive overall and really liked the menu bar on the left. He was able to go through the entire test quickly and smoothly. Likes the “People” section but would spice it up a little, since he considers it a bit dull visually. The Subject bar in the discussions

should be more visible and more clear that it is where you put the subject. Also really likes the “News” and “Forum” section. Would only add a section for the Grades of the students and maybe change the order of the sections in the menu bar.

**T10:** This participant also finished pretty quickly and went smoothly through the tasks and fully in Swedish. The most problem he had was finding the announcement of the teacher according to him. Said everything was really intuitive and that part of the reason he could manage through everything in Swedish with not much problems was because with the icons everything was easy to find. He finds the “Forum” just okay, while he considers the “News” section pretty necessary. Also suggests a section for the Grades.

## **Issues and Suggestions**

### **a) Issues**

- New message on the “Message” section can be difficult to find (T6, T7)
- Sometimes the Think Aloud method does not work as well (T6, T10)
- Some people did not change language (T7, T10)

### **b) Suggestions**

- New section for the Grades (T9, T10)
- A section where you can find the Coursebooks on pdf as well as the tools that most people use in the course (programs, webs, etc.) (T8)
- Change the order of the section buttons on the menu bar (T9)
- Swap the flags to change Language (T6, T7, T10)
- Change the interface for the message section or make the “New Message” button more visible or intuitive (T6, T7)

## **Analysis and Conclusions**

Just as the first iteration all of the comments and data gathered serve as useful information to evaluate the design. Not only for the design of this iteration, but for the previous one as well.

The first thing we can observe is that overall, the “News” section and the “Forum” section have been a success. The participants liked how quick and easy it was to see something as important as the announcements of the teacher or to see and access the discussions. News was preferred over Forum, mainly because some people do not find that section as necessary nowadays.

The second thing we can observe is that the additions on the first iteration are still a success for the most part, but could need some tweaks to make them even better or accessible. Naming the “Inbox” section “Messages” and changing the icon was a great idea, but the section needs even more to make it intuitive enough. People could also have some extra functions or a new interface as a whole. And finally, everyone thought the language was very easy to change, but some participants find more intuitive to have the Swedish flag when it’s on Swedish.

One more time, it seems that the level with computers does not affect that much when going through the page, as the fastest time was made by someone who defined their computer knowledge as “Normal”. People did not have too many problems as well solving the tasks, except maybe participants T7, who struggled a bit finding how to send a message without using the “People” section.

The feedback was also positive overall, and the participants seemed pleased with the design. This will be taken into account when gathering design ideas for the next iteration for improvement.

## References

1. Rubin, J. & Chisnell, D. *Handbook of Usability Testing: How to plan, design and conduct effective tests*. Second Edition. Indianapolis, Wiley Publishing.

## Appendix 01 – Canvas Redesign (Iteration 2)

ISAD15, vt21 > Announcements

All Search

[External Feeds](#)

**Messaging Test**  
[All Sections](#)  
 Dear Testers, we require your help to improve the Canvas page. We will need some...  
 Posted on: Mar 4, 2021 at 2:38pm

**A questionnaire about distance education during the pandemic**  
[All Sections](#)  
 Dear Master students, we have been asked by colleagues at a Greek university to d...  
 Posted on: Feb 24, 2021 at 11:44am

**Sign up for Report 1 supervision Thu or Fri w8**  
[All Sections](#)  
 Please, go to "Sign up for Report 1 supervision Thu or Fri w8", click Edit, and enter ...  
 Posted on: Feb 24, 2021 at 11:39am

### “News” section in English

ISAD15, vt21 > Anslag

Alla Sök

[Externa flöden](#)

**Messaging Test**  
[Alla sektioner](#)  
 Dear testers, we require your help to improve the Canvas page. We will need some...  
 Publicerad den: 4 mar 2021 kl 14.38

**A questionnaire about distance education during the pandemic**  
[Alla sektioner](#)  
 Dear Master students, we have been asked by colleagues at a Greek university to ...  
 Publicerad den: 24 feb 2021 kl 11.44

**Sign up for Report 1 supervision Thu or Fri w8**  
[Alla sektioner](#)  
 Please, go to "Sign up for Report 1 supervision Thu or Fri w8", click Edit, and enter ...  
 Publicerad den: 24 feb 2021 kl 11.39

### “News” section in Swedish

ISAD15 Essays 2021 1 > Discussions

All Search by title or author... + Discussion

▼ Discussions Ordered by Recent Activity

Lucas.... Last post at Feb 24 at 11:34am	2 2	🔖
Mikaela... Last post at Feb 23 at 11:32am	0 1	🔖
Isuru and Kashif... Last post at Feb 23 at 10:45am	0 1	🔖
Rebecka...		🔖
I have various questions about my comments Last post at Feb 21 at 2:24pm	0 1	🟢

### “Forum” section in English

ISAD15 Essays 2021 1 > Diskussioner

Alla Sök efter titel eller skapare ... + Diskussion

▼ Diskussioner Ordna efter senaste aktivitet

Lucas.... Senaste inlägg kl. 24 feb kl 11.34	2 2	🔖
Mikaela... Senaste inlägg kl. 23 feb kl 11.32	0 1	🔖
Isuru and Kashif... Senaste inlägg kl. 23 feb kl 10.45	0 1	🔖
Rebecka...		🔖
I have various questions about my comments Senaste inlägg kl. 21 feb kl 14.24	0 1	🟢

### “Forum” section in Swedish



Account  
News  
Courses  
People  
Calendar  
Messages  
Forum  
Svenska

Edit View Insert Format Tools Table

12pt Paragraph B I U A T<sup>2</sup> [Link] [Image] [Video] [File] [Undo] [Redo] [Help]

Cancel Save

Attachment Seleccionar archivo Ningún archi... seleccionado

## New Discussion Page

## Appendix 02 – Background Questionnaire

### PRE-TEST QUESTIONNAIRE

Participant Nr: \_\_\_\_\_ Age: \_\_\_\_\_

Gender: ☐ Male ☐ Female ☐ Non-Binary ☐ Other

What is your current education level?

- ☐ Undergraduate
- ☐ Bachelor Student
- ☐ Master Student
- ☐ Other

What is your level with computers?

- ☐ I can barely use one
- ☐ I can manage them for the most part
- ☐ I can solve most of the problems I face when using one
- ☐ I am an expert with computers

Have you ever used Canvas?

- ☐ Yes ☐ No

Do you speak Swedish?

- ☐ Yes ☐ No

## Appendix 03 – Information and Consent Form

### INFORMATION AND CONSENT FORM

#### For Canvas Usability Redesign Testing

Please, note that:

All the personal data requested will be processed in accordance with your informed consent. The participation in this usability test is voluntary and you can always revoke your consent at any time with no need to give any reason or explanation.

The data gathered in this study will only be retained until it has received a passing grade and it will be only used to improve the proposed Canvas redesign (a system used in Karlstad University). All information will be strictly confidential, and you will remain anonymous.

Karlstad University is the personal data controller. According to *Personuppgiftslagen* (The General Data Protection Regulation, GDPR, in effect since May 25, 2018), you have the right to access all your data that has been collected without cost, and if needed have any errors corrected. The contact information of the data protection officer at Karlstad University is [dpo@kau.se](mailto:dpo@kau.se).

In this usability study you will have to fill in a questionnaire with some personal information, perform some tasks with the ~~Qzlab~~ program and participate on a short interview about the prototype and the tasks.

I have been informed about this study and consent to my participation. I understand that my participation is voluntary, and that data will be processed anonymously. Therefore, I consent to Karlstad University processing my personal data in accordance to GDPR and the information provided.

Date:

Signature:

## Appendix 04 – Semi-structured interview questions

- Was the program easy to use? Was the language easy to change?
- Do you think the “People” section is good? Do you consider necessary?

- Was the messaging system easy to use and to find? What do you think of the icon in the people section?
- Do you like the “News” and “Forum” section? Would you change them?
- Would you add any feature to the program or change a section?

## Appendix 05 – Orientation Script

### ORIENTATION SCRIPT

“Thank you for helping me on this experiment. Before we begin, I will need you to sign this consent form. (Gives consent form). This is needed so that we can make sure you understand the rights you have before, during and after the session and that you agree to give me some data we ask for the analysis and improvement of the design of the page you will be testing as well as the experiment.”

(Consent form is signed)

“Okay, so now I will tell you what the experiment will consist of. I’m here to test a design of a web page we have created. This page needed a redesign and we need people to test if the page works alright and if the usability reaches the expectations we have. “

“Now I will give you a questionnaire with some personal questions that will help us analyze the design in the future. After I give you this questionnaire, I will show you and explain you what we call the “Thinking Aloud” method. You will have to use this method during the test. After that, we will be making the test. It will consist on using the page I previously mentioned and completing some tasks I will give you so you go through the program. During the session I will be able to see where you click and how you use the page. I’ll be taking some notes while you use the program. Please keep in mind that we are not testing you at any moment, you are here to help us test the design.”

“Finally, after the test we will have a semi-structured interview where you will tell me your feelings, opinion and experience with the design we are testing. Please be honest with any of the feedback given, as every detail, positive or negative, is very helpful for the analysis as a whole and the possible improvements of the design. “

“This session will take around 30 minutes. Do you have any questions?”

# Report Three

## Canvas Page Redesign

By Felipe Bermejo, ISAD 2020/2021

### **Abstract**

Having completed two iterations of this redesign, the third one keeps most of the previous design elements and just expands with a couple of new sections and features. More access in the “Courses” section has been granted to place the “Files” section and “Grades” section. Some changes have also happened in the test design, mainly introducing a post-test questionnaire to get a better grasp of the participants opinions and feelings. The results show that the redesign has been a success overall, but that it still needs some improvements, notably on the “People” section as it was the least preferred of them all.

### **Introduction**

The Canvas page is the LMS (Learning Management System) used in Karlstad University to help teachers and students. As it has various interaction and usability problems, a redesign of the page was presented as a project. This project had two previous iterations. The “People” section was created along with an icon to message people directly, the messaging system was simplified and a button for changing language was implemented in the first one.

On the previous iteration, after taking into account some of the suggestions and conclusions from iteration one, the “News” section was created where the announcements of the teachers are displayed, the “Forum” section was also created to easily access the discussions and the “Inbox” section was redefined into “Messages” to make it more intuitive.

After this, just as in iteration one, feedback was collected and analyzed. Suggestions of both iterations were considered for this final step of the project. From this part of the report on, we

will see the changes implemented in the design and in the experiment with the objective of improving the experience of the page. We will also see the conclusions and analysis made after testing the program.

### **Redesign of the “Course” section: “Files” and “Grades” subsections**

This iteration of the project has kept all of the changes made previously to the original Canvas page. This was because most of the criticism and suggestions were more about expanding what the redesign had already more than changing things that were incorrect in it.

The changes implemented are inside the “Courses” section. Now the users have access to the content inside the courses (in this case there is only one). Inside the course various subsections can be found. These are mostly similar to the original Canvas page. The “Discussions” and “Announcements” were erased from the submenu and the “Files” section was added. It keeps the “Home” and “Grades” section looking and working very similar to the original site. The “People” option will redirect users to the “People” section.

### **Motivation for Changes**

After the second iteration most of the suggested changes were expansive. One of them that was requested by various participants was a section for the Grades. Since this was already functional in the original page it was decided to make it available so that it could be tried and see if the next participants like it or not.

Along with this, the “Courses” section also needed some redesign as some of the options it had were not needed anymore as entire sections were made from some of their subsections. Examples of this are the “News” and “Forum” section, which originally were subsections of “Courses”. The “Files” section was added from the “Groups”. Most of the students felt it was pretty useless to create groups for each assignment mostly to just put their archives in the “Files”

section only found there. To make it simpler and more coherent it was moved to the “Courses” instead.

### **Design of the Experiment**

The experiment was conducted fully online just as the last time. The reasons being the same, to ensure the right participants are selected and also due to the pandemic situation. The requirement (Rubin & Chisnell, 2008, p. 121) chosen in the first two iterations which is that the participants do not know any Swedish was also present on this iteration. Apart from that, some of the participants from the first iteration were also called to participate on this experiment. The reason is to see if those participants feel like the page has improved and to also get some testing from people who more or less already know the design.

The process has mostly remained the same, only changing some parts to accommodate the new tool: a post-test questionnaire (Rubin & Chisnell, 2008, p. 192). The semi-structured interview questions had to be changed for this reason. Along with the Thinking Aloud technique, these two tools will help greatly in the analysis of the participants actions and feedback.

The steps of the experiment on this iteration were:

1. Explain every step of the experiment with the help of the orientation script.
2. Give the information and consent form
3. Give the participant the background questionnaire
4. Explain and show an example of the Thinking Aloud technique
5. Explain the tasks of the test
6. Conduct the Test
7. Give the participants the post-test questionnaire.
8. Finalize with a semi-structured interview

### **Orientation Script**

Just as the previous iteration an orientation script (Rubin & Chisnell, 2008, p. 155) was used to ensure all the participants received the same information in a very similar way. The orientation script also helps a lot to set the tone for the test and to help the participants get calmer and more comfortable as they know how the test will go. The orientation script had to be slightly altered to explain the post-test questionnaire to the participants as well.

### **Ethics and participant's privacy**

Before the background questionnaire was handed in, an information and consent form was given to the participants and then asked to be signed. This consent form informs the participant of every right they have while making the test, the fact that the test is voluntary and can always go back and deny their consent during the making of it and that they consent for the use of some of their data asked for the purpose of this study only. It was made in accordance with the GDPR standard protocol, just as the two previous iterations. On top of that, the participants information was also kept private (Rubin & Chisnell, 2008, p. 151). It is very important that the participants remain anonymous, and to ensure that we do not use any names or share the data collected.

### **Background questionnaire**

A background questionnaire (Rubin & Chisnell, 2008, p. 162) was given after the consent form. This one is the same as the previous iteration, since no new information was needed from the participants to help in the analysis phase of the report. It also served once again to see if people actually checked on the requirement (not knowing Swedish). The participants were asked for age, gender, level with computer, whether they have used Canvas before or not, and if they know how to speak Swedish. In spite of the mentioned previously, in the Table 01 below we can see a new category. This category is if the participant has participated on this test before as it was considered information that the people reading this report might need.

**Table 1** – Data of the Background Questionnaire done to participants

ID	Gender	Age	Studies	Level with Computers	Used Canvas	Knows Swedish	Participated before
T11	M	20	Bachelor	Good	No	No	No
T12	NB	19	Bachelor	Good	No	No	No
T13	M	20	Bachelor	Excellent	No	No	No
T14	M	19	Bachelor	Excellent	Yes*	No	Yes
T15	F	19	Bachelor	Normal	Yes*	No	Yes

\*: participants have not tried the original Canvas design, but the redesign of Iteration 1

### Thinking Aloud Technique

The thinking aloud technique (Rubin & Chisnell, 2008, p. 204) was also kept in this iteration as a tool to help with the analysis of the participants actions and feedback. It is a very useful technique to spot some misconceptions the participants might have with the test, some difficulties they can face with the design, some undesired behaviours or even confirm the parts of the test that work correctly and smoothly. Even with the risks the technique have, being that it can distract the participant, make them feel unnatural or work slower, we have considered that the technique has been positive overall. It helped in the previous iteration and so it did in this one, paying by far for the risks it has.

To help the participant be more comfortable with it, the technique is explained before the test and also an example is made so that participants get exactly what they are expected to do. Users are told as well not to overtry the technique if it feels too unnatural and distracting for them, as the priority is that they conduct the test correctly.

### Scenario and Tasks

The starting scenario is the same as the previous iteration. The user will start in the “Courses” section in Swedish. From here the participants will have to:

1. Check the announcement made by the teacher about the testing
2. Follow the tasks in the announcement, this means:



- a. Send a message to Jessica Comte
  - b. Send a message to Mikaela Malström via the “People” section
  - c. Create a new discussion
  - d. Upload an assignment on the “Files” section
3. Check your grades for the assignment.

### **Post-Test Questionnaire**

The new tool introduced in this iteration for the experiment is the post-test questionnaire. Rubin & Chisnell (2008, p. 192) say that these kinds of questionnaires are really good to pinpoint the strengths and weaknesses of the designs. It reflects on a very nice way the participants opinions and feelings about what they just tested.

The questionnaire was made using a one through five Rupert scale, where one is strongly disagree and five strongly agree. There were thirteen statements and the participants had to give a number in whether they agreed or disagreed with it.

### **Semi-structured interview**

Once the post-test questionnaire is finished, the testing concludes with a semi-structured interview. This time, the questions of the interview were completely changed compared to the ones of the previous iterations. This is because with the implementation of the questionnaire, most of the information the interview gathered was redundant. The interview this time is focused on what the participants thought on the design overall and to double down on finding the weaknesses and strengths of the program without being redundant. It was also the best source for direct feedback, suggestions, and new ideas.

### **Compensation to participants**

Since the experiments were conducted online, there was no possibility of giving a direct compensation to participants, just like in iteration two. Instead, we used indirect compensations in the form of promises of a drink, an invitation to the cinema, a disco and so on. We did all the possible to compensate participants on the best way possible, but always being true to what is possible and not.

### **Pilot test**

Pilot testing was very helpful in the two previous iterations, helping effectively to spot some errors in the design of the program and the experiment, even being able to add some little changes to improve overall. This time, however, the pilot test served more as a tool to check that everything was working correctly before any real tests were conducted. The reason was that no errors were found during the execution of this test, and no improvements were brought up to the table.

The pilot testing process remained the same as the two previous iterations. The participant makes the test as if it was a real tester, and after everything is done, we go to the Ozlab and we try to “break” the program in search of errors. After that, we have a little chat to see if the experiment process is considered correct and if any little tweaks can be made.

**Table 2** – Information of the Pilot Testers

<b>ID</b>	<b>Age</b>	<b>Gender</b>	<b>Education Level</b>	<b>Computer Level</b>	<b>Used Canvas</b>	<b>Knows Swedish</b>	<b>Signed</b>
PT3	21	M	Bachelor	Excellent	No	No	Yes

The test was made by the same person who helped with the pilot test on the previous iteration. However, as stated earlier, no error was found in the program and we did not come up with any tweaks for the experiment overall.

### **Result of the Test**

All the participants successfully completed all the tasks presented to them. No recording was made on this iteration as well. With the thinking aloud technique, the post-test questionnaire and the semi-structured interview no recording was necessary. The participants completed the test in a computer since it is where the program is designed for.

Table 3 represents the information from the test of each participant. There is an ID of the participant, the date of the experiment, the time until they reached the announcement, the time until they made the discussion on the “Forum” section, then the final time and finally whether the participant changed the language to English or not.

**Table 3** – Data of the participants during the test

ID	Date	Time 1	Time 2	Total Time	Changed to English
T11	23-03-2021	2:53	6:27	7:56	Yes
T12	24-03-2021	0:41	4:05	6:24	Yes
T13	24-03-2021	1:34	3:46	5:29	No
T14	24-03-2021	0:15	1:42	2:35	Yes
T15	24-03-2021	0:53	3:32	4:40	Yes

### Comments and notes of the participants

Below there are some notes taken from the test or after it. They summarize the experience of each participant overall, the feelings, difficulties they had and feedback.

**P11:** This participant had trouble finding the “Files” subsection. He feels like Files should be more important than for example the “People” section, which could be inside other sections. Finds the program complete as a LMS and really likes the “Grades” subsection and the “Forum”. Changing the language was very easy for him.

**P12:** This participant also had problems finding the “Files” subsection. Would swap the language flags because it was clearer for them. This participant felt that the page was okay overall, but that the “People” section was not important enough for a place in the menu bar, and

that the “Forum” was maybe a bit too general. Also thinks that the “Files” do not look as somewhere to upload assignments. However, the participant really liked the “News” section.

**P13:** He was able to make the entire test in Swedish as he felt that everything was intuitive enough and that the icons were really helpful for that. Found the “Courses” section very complete and easy to access. The participant also really liked the “Forum” as he liked how intuitive it was. He really liked the LMS as a whole. “People” section was the least favourite once again because of the lack of a filter and search bar.

**P14:** He was able to go really quickly and smoothly through the program. Would like the “Files” section to show a deadline for the assignments. Really liked the “Courses” section as he considered that it was the most complete and basic section for a LMS. He felt that “People” could be blended into another section. He also found the “Files” subsection kind of difficult to find.

**P15:** This participant did not have very much to criticize as she found everything correct in general. “Messages” was the favourite section as it was easy and simple for her. Also likes the bar in the message box as a feature. She also considers the “Forum” section the most necessary of all, as it is the best tool of communication both for teachers and students. Checking the announcement was the most confusing part of the test for her.

### **Suggestions**

- Blending in the “People” section with another one (T11, T12, T14)
- Having a little number next to some of the icons to see how many new messages or announcements you have. (T13)

### **Analysis and conclusions**

The comments and data gathered during the test was very helpful to gain some insight into the redesign's strength and weaknesses.

The first thing we can observe is that overall, the page redesign could be called a success. Every one of the participants thought that the page was intuitive and were satisfied with the experience overall. The little number of suggestions also show how complete it is at this stage, as most of the participants had little suggestions because they couldn't think of something else the design needed or many changes that they would do to the page. The participants who made the test on the first iteration also thought that the page improved since the first iteration.

When talking about sections it is pretty clear that "People" was the least favourite of almost every participant. This would probably be the biggest weakness the page has, as most of the participants thought it was just okay, maybe too simple and that it could be inside other sections like "Messages" or "Courses". The favourite section of most participants was "Courses" because most participants thought it was the most complete of all of them and the most necessary. The rest of the sections had also very positive feedback, with little comments of complaints about them.

Based on the feedback received, the suggested changes would be to try and change the flag of the language button, to rethink a new section instead of the "People" section or improve the section and make it more likeable, to add little numbers next to the icons showing the new messages and changing the "New Message" button.

## References

1. Rubin, J. & Chisnell, D. *Handbook of Usability Testing: How to plan, design and conduct effective tests*. Second Edition. Indianapolis, Wiley Publishing.

## Appendix 01 – Canvas Redesign (Iteration 3)

ISAD15, vt21 > Files

2021 vår

Search for files

0 items selected

+ Folder

Upload

Files

Grades

People

Modules

Name	Date created	Date modified	Modified by	Size
Assignment	8 Mar 2021	8 Mar 2021	Participant	2.6 MB

88% of 104.9 MB used

[All my files](#)

“Files” subsection in English

ISAD15, vt21 > Filer

2021 vår

Sök efter filer

0 objekt valda

+ Mapp

Ladda upp

Filer

Omdömen

Personer

Moduler

Namn	Skapad	Ändrad	Ändrad av	Storlek
Assignment	15 mar 2021	15 mar 2021	Participant	85 KB

88 % av 104,9 MB använda

[Alla mina filer](#)

“Files” subsection in Swedish

ISAD15, vt21 > Grades > Participant

2021 vår

Home

Files

Grades

People

Modules

Grades for Participant

Print Grades

Total: N/A

Show all details

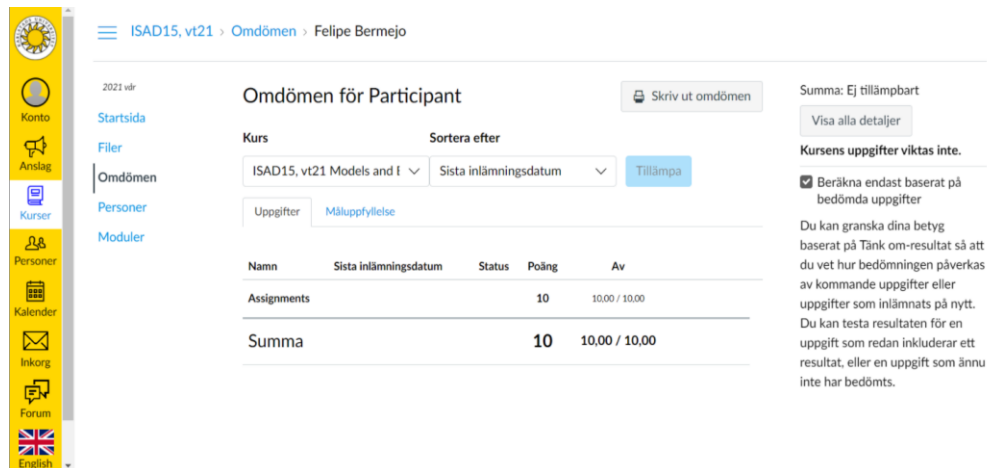
Course assignments are not weighted.

☒ Calculate based only on graded assignments

You can view your grades based on What-if scores so that you know how grades will be affected by upcoming, or resubmitted assignments. You can test scores for an assignment that already includes a score, or an assignment that has yet to be graded.

Name	Due	Status	Score	Out of
Assignments			10	10.00 / 10.00
Total			10	10.00 / 10.00

## “Grades” subsection in English



2021 vdr

Startsida

Filer

Omdömen

Personer

Moduler

Kurs

Sortera efter

ISAD15, vt21 Models and t

Sista inlämningsdatum

Tillämpa

Uppgifter

Måluppfyllelse

Namn	Sista inlämningsdatum	Status	Poäng	Av
Assignments			10	10.00 / 10.00
Summa			10	10.00 / 10.00

Skriv ut omdömen

Summa: Ej tillämpbart

Visa alla detaljer

Kursens uppgifter viktas inte.

☒ Beräkna endast baserat på bedömda uppgifter

Du kan granska dina betyg baserat på Tänk om-resultat så att du vet hur bedömningen påverkas av kommande uppgifter eller uppgifter som inlämnats på nytt. Du kan testa resultaten för en uppgift som redan inkluderar ett resultat, eller en uppgift som ännu inte har bedömts.

## “Grades” subsection in Swedish

## Appendix 02 – Background Questionnaire

### PRE-TEST QUESTIONNAIRE

Participant Nr: \_\_\_\_\_ Age: \_\_\_\_\_

Gender: ☐ Male ☐ Female ☐ Non-Binary ☐ Other

What is your current education level?

- ☐ Undergraduate
- ☐ Bachelor Student
- ☐ Master Student
- ☐ Other

What is your level with computers?

- ☐ I can barely use one
- ☐ I can manage them for the most part
- ☐ I can solve most of the problems I face when using one
- ☐ I am an expert with computers

Have you ever used Canvas?

- ☐ Yes ☐ No

Do you speak Swedish?

- ☐ Yes ☐ No

## Appendix 03 – Information and Consent Form

## INFORMATION AND CONSENT FORM

### For Canvas Usability Redesign Testing

Please, note that:

All the personal data requested will be processed in accordance with your informed consent. The participation in this usability test is voluntary and you can always revoke your consent at any time with no need to give any reason or explanation.

The data gathered in this study will only be retained until it has received a passing grade and it will be only used to improve the proposed Canvas redesign (a system used in Karlstad University). All information will be strictly confidential, and you will remain anonymous.

Karlstad University is the personal data controller. According to *Personuppgiftslagen* (The General Data Protection Regulation, GDPR, in effect since May 25, 2018), you have the right to access all your data that has been collected without cost, and if needed have any errors corrected. The contact information of the data protection officer at Karlstad University is [dpo@kau.se](mailto:dpo@kau.se).

In this usability study you will have to fill in a questionnaire with some personal information, perform some tasks with the ~~Ozlab~~ program and participate on a short interview about the prototype and the tasks.

I have been informed about this study and consent to my participation. I understand that my participation is voluntary, and that data will be processed anonymously. Therefore, I consent to Karlstad University processing my personal data in accordance to GDPR and the information provided.

Date:

Signature:

## Appendix 04 – Semi-structured interview questions

- How was the experience overall? How did you feel after completing the test?
- Which was your favourite section and why? And your least favourite one?
- Which was your favourite feature? Did you like the feature in the “People” section?
- Which of the sections do you consider the most necessary?
- Which was the most confusing part of the test for you?
- Do you have any more suggestions or changes proposed in the program?

## Appendix 05 – Orientation Script



## ORIENTATION SCRIPT

“Thank you for helping me on this experiment. Before we begin, I will need you to sign this consent form. (Gives consent form). This is needed so that we can make sure you understand the rights you have before, during and after the session and that you agree to give me some data we ask for the analysis and improvement of the design of the page you will be testing as well as the experiment.”

(Consent form is signed)

“Okay, so now I will tell you what the experiment will consist of. I'm here to test a design of a web page we have created. This page needed a redesign and we need people to test if the page works alright and if the usability reaches the expectations we have. “

“Now I will give you a questionnaire with some personal questions that will help us analyze the design in the future. After I give you this questionnaire, I will show you and explain you what we call the “Thinking Aloud” method. You will have to use this method during the test. After that, we will be making the test. It will consist on using the page I previously mentioned and completing some tasks I will give you so you go through the program. During the session I will be able to see where you click and how you use the page. I'll be taking some notes while you use the program. Please keep in mind that we are not testing you at any moment, you are here to help us test the design.”

“Finally, after the test I will give you a post-test questionnaire where you will have to rate from a scale of one through five some statements and after it we will have a semi-structured interview where you will tell me your feelings, opinion and experience with the design we are testing. Please be honest with any of the feedback given, as every

detail, positive or negative, is very helpful for the analysis as a whole and the possible improvements of the design. “

“This session will take around 30 minutes. Do you have any questions?”

## Appendix 06 – Post-Test Questionnaire

### Post-test questionnaire

Statements	1	2	3	4	5
1. The program was easy to use					
2. The language was easy to change					
3. The “People” section was necessary					
4. The “News” section is important					
5. The “Forum” section is useful					
6. The messaging system was intuitive					
7. I was able to go through the program smoothly					
8. The Grades were easy to find					
9. I like the “Files” section for uploading assignments					
10. I would use this program everyday as my LMS					
11. The amount of information displayed was enough to understand the program					
12. The interface of the page was intuitive					
13. I was satisfied with the experience overall					

### Original Blank Questionnaire

#### P11 results:

Statements	1	2	3	4	5
1. The program was easy to use				x	
2. The language was easy to change					x
3. The “People” section was necessary				x	
4. The “News” section is important					x
5. The “Forum” section is useful					x
6. The messaging system was intuitive					x
7. I was able to go through the program smoothly				x	
8. The Grades were easy to find					x
9. I like the “Files” section for uploading assignments					x
10. I would use this program everyday as my LMS				x	

<b>11. The amount of information displayed was enough to understand the program</b>					<b>x</b>
<b>12. The interface of the page was intuitive</b>					<b>x</b>
<b>13. I was satisfied with the experience overall</b>					<b>x</b>

**P12 results:**

<b>Statements</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>1. The program was easy to use</b>					<b>x</b>
<b>2. The language was easy to change</b>					<b>x</b>
<b>3. The “People” section was necessary</b>			<b>x</b>		
<b>4. The “News” section is important</b>					<b>x</b>
<b>5. The “Forum” section is useful</b>					<b>x</b>
<b>6. The messaging system was intuitive</b>					<b>x</b>
<b>7. I was able to go through the program smoothly</b>				<b>x</b>	
<b>8. The Grades were easy to find</b>					<b>x</b>
<b>9. I like the “Files” section for uploading assignments</b>			<b>x</b>		
<b>10. I would use this program everyday as my LMS</b>				<b>x</b>	
<b>11. The amount of information displayed was enough to understand the program</b>					<b>x</b>
<b>12. The interface of the page was intuitive</b>					<b>x</b>
<b>13. I was satisfied with the experience overall</b>					<b>x</b>

**P13 results:**

<b>Statements</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>1. The program was easy to use</b>					<b>X</b>
<b>2. The language was easy to change</b>					<b>X</b>
<b>3. The “People” section was necessary</b>				<b>X</b>	
<b>4. The “News” section is important</b>					<b>X</b>
<b>5. The “Forum” section is useful</b>					<b>X</b>
<b>6. The messaging system was intuitive</b>					<b>X</b>
<b>7. I was able to go through the program smoothly</b>				<b>X</b>	
<b>8. The Grades were easy to find</b>				<b>X</b>	
<b>9. I like the “Files” section for uploading assignments</b>				<b>X</b>	

<b>10. I would use this program everyday as my LMS</b>					<b>X</b>
<b>11. The amount of information displayed was enough to understand the program</b>					<b>X</b>
<b>12. The interface of the page was intuitive</b>					<b>X</b>
<b>13. I was satisfied with the experience overall</b>					<b>X</b>

**P14 results:**

<b>Statements</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>1. The program was easy to use</b>					<b>X</b>
<b>2. The language was easy to change</b>					<b>X</b>
<b>3. The “People” section was necessary</b>				<b>X</b>	
<b>4. The “News” section is important</b>				<b>X</b>	
<b>5. The “Forum” section is useful</b>					<b>X</b>
<b>6. The messaging system was intuitive</b>			<b>X</b>		
<b>7. I was able to go through the program smoothly</b>					<b>X</b>
<b>8. The Grades were easy to find</b>					<b>X</b>
<b>9. I like the “Files” section for uploading assignments</b>				<b>X</b>	
<b>10. I would use this program everyday as my LMS</b>					<b>X</b>
<b>11. The amount of information displayed was enough to understand the program</b>				<b>X</b>	
<b>12. The interface of the page was intuitive</b>					<b>X</b>
<b>13. I was satisfied with the experience overall</b>					<b>X</b>

**P15 results:**

<b>Statements</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>1. The program was easy to use</b>				<b>X</b>	
<b>2. The language was easy to change</b>				<b>X</b>	
<b>3. The “People” section was necessary</b>					<b>X</b>
<b>4. The “News” section is important</b>			<b>X</b>		
<b>5. The “Forum” section is useful</b>					<b>X</b>
<b>6. The messaging system was intuitive</b>					<b>X</b>
<b>7. I was able to go through the program smoothly</b>					<b>X</b>
<b>8. The Grades were easy to find</b>				<b>X</b>	

<b>9. I like the “Files” section for uploading assignments</b>			<b>X</b>		
<b>10. I would use this program everyday as my LMS</b>			<b>X</b>		
<b>11. The amount of information displayed was enough to understand the program</b>			<b>X</b>		
<b>12. The interface of the page was intuitive</b>					<b>X</b>
<b>13. I was satisfied with the experience overall</b>				<b>X</b>	