

Development study of KTH Social 's schedule function

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**KTH Computer Science
and Communication**

Development of KTH Social 's schedule function

R O B E R T E L I A S S O N
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Abstract

The usage of KTH Social increases and professors are to a greater extent moving towards KTH Social in order to manage their courses. The purpose of KTH Social is to provide all course relevant information visualised in one single platform. The purpose of this study is to evaluate whether there are development possibilities of the KTH Social schedule area and what these are. In a questionnaire, which was formed with theories of Human-computer interaction and Time management in mind, KTH students were to answer questions regarding the schedule area of KTH Social. Development suggestions were included in the questionnaire as well, in order to receive feedback from the students. The results were compiled and correlations were made and discussed. The students were positive to the development suggestions. Development suggestions within several sections of the schedule area could be presented.

Utvecklingsstudie av KTH Socials schemafunktion

Sammanfattning

Användningen av KTH Social ökar och professorer börjar i större utsträckning att använda sig av KTH Social i sina kurser. Syftet med KTH Social är att tillhandahålla all nödvändig kursinformation på en och samma plattform. Den här studien syftar till att undersöka huruvida det finns utvecklingsmöjligheter till schemadelen av KTH Social och vilka dessa är. I en enkät, som var utformad utifrån teorier inom Människa-datorinteraktion och Time Management, fick KTH-studenter svara på frågor rörande schemadelen i KTH Social. Enkäten innehöll även utvecklingsförslag som studenterna fick tycka till om. Resultaten sammanställdes och korrelationer påvisades och diskuterades. Studenterna visade sig positivt inställda till utvecklingsförslagen. Utvecklingsförslag inom flera områden av schemadelen kunde presenteras.

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1. Introduction

This section contains background information about the study and its purpose. Reasons for why this subject was chosen as well as justifications for the problem definition of the study will be presented.

Throughout the years, time management has been an essential part of the academic and business world. Time management can be defined as the act or process of determining needs, setting goals to achieve these needs, prioritising and planning tasks required to achieve these goals (Lakein, 1973 cited in Claessens et al., 2007). Research indicates that time management behaviours increase the perceived control of time, work satisfaction and health while reducing the stress factor (Claessens et al., 2007). Using tools and techniques, such as scheduling, settings goals, prioritising or making to-do lists, are behaviours further aimed at an effective use of time (Britton and Tesser, 1991; Macan, 1994, 1996). Past decades of technological advancement, such as the Internet, online calendars and applications, have participated in the constant development of these tools and techniques (A brief history of time management, 2010).

At The Royal Institute of Technology (KTH), several different platforms for course information and organization are used. While a platform such as Bilda still proves to be useful to some extent, professors are now moving toward the in-house developed KTH Social (see chapter 4.1 for user statistics).

KTH Social is a web platform, facilitating communication between students and professors, with the purpose of solving the issue of students having a difficult time finding course information, such as important dates, deadlines and schedule services (KTH Social för lärare, 2012).

In a video posted on KTH Social för lärare (2012), programming professor Olle Bälter raises the issue of students disregarding, or being unable to find, information given on course homepages. Instead, they turn toward professors for detailed information on courses. This includes information such as: due dates, hand-in locations, which classroom a lecture will be held in, and the question whether the class has “academic quarter” - a tradition where the lecture starts fifteen minutes after the specified time - or not. According to Bälter, these are all issues that KTH aims to resolve with KTH Social.

It is in the interest of this study that these matters are taken into consideration to evaluate whether or not it would be possible to solve this issue within the schedule area.

1.1 Purpose

The purpose of this study is to evaluate the possibilities to further develop the schedule area of KTH Social with an ambition to achieve the following goals:

- Determine what kind of course information should be visualised in the schedule.
- Improve usability for the student.
- Create a course information template for professors, with guidelines, advising on what information is relevant to students in the schedule and how to structure this course information when uploading it to the schedule.

If this study reveals that possibilities to develop the schedule area exist, development suggestions will be made.

1.2 Problem definition

The following problem definition has been formulated:

What are the development opportunities for the schedule function of KTH Social?

To answer the problem definition, four sub questions have been formulated:

- What kind of issues occurs in the schedule function today?
- What functions are needed to facilitate the students' study planning?
- What kind of course information needs to be visualised?
- How can the course information be visualised in a user friendly way?

1.3 Target group

The target group of this study includes the development group Virtuellt campus and faculty members at KTH. For Virtuellt campus, this study is supposed to be consultative for future development of the schedule area of KTH Social. Professors may use the course information template when adding or editing lecture details in the schedule. Development groups of other platforms and faculties in other universities may also find use for this study.

1.4 Delimitations

This study is limited to KTH in Stockholm with the national and cultural variation represented there.

1.4.1 Delimitations of the respondent group

Respondents of the study have been delimited to students at KTH since they represent the main target group of KTH Social. The study will therefore be delimited to KTH students' perception of KTH Social.

The respondent group will not be delimited any further. It could be interesting to evaluate differences in age, gender and other aspects. This will however not be taken into account in this study because the target group of KTH Social includes all kinds of students. A

differentiation on these aspects may serve to scatter the problem definition and remove focus from the average user.

1.4.2 Delimitations of the study

The functionality of the schedule will be evaluated by looking at both time management and usability aspects. These aspects are applied when visualising the schedule area, and aiding the planning behaviour of students, to ensure that the development suggestions serve their purposes.

The main focus of this study is the schedule area of KTH Social. With this consideration in mind other areas, such as Virtuellt campus, may still be brought up. The introduction of other areas is delimited to serve as a means to understand the complexity of the schedule area or as an inspiration to the development suggestions.

2. Background and theory

In this section, the background of KTH Social will be presented and central concepts within the area of time management and human-computer interaction, as well as theories covering the study methods, will be defined and discussed.

2.1 KTH Social

In May 2009, Peter Gudmundson, principal of KTH at the time, decided to establish a designated project for the development and coordination of KTH's virtual education support. The project, called KTH Social, was launched in early 2011 as an online tool for communication and collaboration between students and professors at KTH. The aim of the project was to provide a common platform for students where they can find all of their course information ask questions and discuss course and study related matters, and communicate with their professors (*Uppföljning och effekter av KTH Social, 2011*).

The main functions of KTH Social are the course pages, available for all the different courses on KTH, as well as course schedules. Students can find information about deadlines, useful links, lecture notes and other course information. Students can also contribute to the content by creating posts or pages, as well as upload course relevant information (*KTH Social för studenter, 2012*).

An important issue raised on the information page of KTH Social is that the material that is supposed to be easily accessible to students at KTH now resides on numerous different platforms, such as Studentwebben, Utbildningswebben, Mina Sidor, Bilda, Daisy et cetera. Furthermore, several courses use their own external course web pages. This complicates

students' search for course and study related information and frequently causes them to miss out on important information (*KTH Social för lärare, 2012*).

2.1.1 Virtuellt campus

The vision of KTH Social is to provide course information and material for all courses given at KTH (*KTH Social för lärare, 2012*). In order to achieve this goal, Virtuellt campus was created as a joint project between Research Centre for Net-based Education (RCN), at KTH, and The Department of Computer and Systems Sciences (DSV), at Stockholm University (*Virtuellt campus, 2011*). Virtuellt campus has the development and coordination of KTH's virtual education support in focus. KTH Social itself originated from this support and is continuously being developed further with the help of Virtuellt campus. The team behind Virtuellt campus maintains an open dialogue on the group page with students, professors and administrative personnel at KTH, regarding functionality, needs and visions of the system (*Grupp: Virtuellt campus, 2013*).

The primary target group of Virtuellt campus are KTH students. The following statements constitute the foundation that directs and shapes the project:

- *Every alteration within the project shall be done with the students' learning and education in mind.*
- *Changes made to Virtuellt campus should always strive to improve the quality of communication between professors and students, as well as among students.*
- *The project shall utilize both physical and virtual elements in order to enhance the learning for all students. A secondary target group are professors, administrative personnel and potential future students.*

(Virtuellt campus, 2011)

2.1.2 Schedule

The following figures 1 and 2 represent the current view of the schedule area at KTH Social. In the figures, obligatory course information, such as date, time, classroom, name and type of course is shown. Professors are able to contribute to the course material by creating pages and posts in the detailed view of the schedule. Students are able to contribute as well by the means of commenting on specific lectures. In this example there has been no additional information added to the lecture detail view of the schedule by the professor or the students.



KURS

Envariabelanalys

Pontus

Schema

Kurser

Program

Grupper

Tjänster

Hjälp!

Sök

In English

KTH:s startsida > Social > Envariabelanalys > Schema

Exportera min kalender

Schema

Visa alla händelser för termin

VT 2012

Vecka 3

Tis 17 jan 13:00-15:00

Föreläsning

FÖRELÄSNING

Plats: FL-3-221 (3-221H)

Tors 19 jan 15:00-17:00

Föreläsning

FÖRELÄSNING

Plats: FL-3-221 (3-221H)

Fre 20 jan 10:00-12:00

Övning

ÖVNING

Plats: FL-3-221 (3-221H)

Vecka 4

Tis 24 jan 10:00-12:00

Föreläsning

FÖRELÄSNING

Plats: FL-3-221 (3-221H)

Ons 25 jan 10:00-12:00

Övning

ÖVNING

Plats: FL-3-221 (3-221H)

Fre 27 jan 08:00-10:00

Seminarium

SEMINARIUM

Plats: FL-3-221 (3-221H)

Vecka 5

Envariabelanalys

KURS SF1625 | 7,5 HP

Sök i kursen

5654 prenumranter

Min prenumeration

NYHETER

SCHEMA

Allmänt för kursen

Registrering

Kurslitteratur

Kursinnehåll

Rekommenderade uppgifter

Teorifrågor

Allmänt om examination

Bonuspoäng

Kontrollskrivningar

Seminarier

Tentamen

Resultat/Statistik

Tidigare läsår

Kursplan m.m.

Länk till hemsida

Mitt kurstillfälle (HT 2012 CMAST CENMI)

Kontakt

Seminariegrupper

Föreläsningar

Repetitionsföreläsning 1

Repetitionsföreläsning 2

Repetitionsföreläsning 3

Övriga kurstillfällen

Ändra mitt kurstillfälle

Figure 1. KTH Social course schedule overview (KTH Social schema, 2012).

5

KTH:s startsida > Social > Envariabelanalys > Schema > Föreläsning, 24 januari 2012 10:00

Föreläsning

☒ Visa i min kalender

Tid: Tisdag 24 januari 2012 kl 10:00 - 12:00

Plats: FL-3-221 (3-221H)

Moment: Föreläsning

Synlighet
Hela världen får läsa.

Taggar
Saknas än så länge.
Lägg till ▼

Senast ändrad
2011-11-16 13:11.

FÖLJ DENNA HÄNDELSE

ANMÄL MISSBRUK

Kommentera händelsen

Hjälp! Sök In English

Envariabelanalys

KURS SF1625 | 7,5 HP

Sök i kursen

5660 prenumaranter Min prenumeration

NYHETER

SCHEMA

Allmänt för kursen

- Registrering
- Kurslitteratur
- Kursinnehåll
- Rekommenderade uppgifter
- Teorifrågor
- Allmänt om examination
- Bonuspoäng
- Kontrollskrivningar ▼
- Seminarier
- Tentamen
- Resultat/Statistik
- Tidigare läsår ▼
- Kursplan m.m.
- Länk till hemsida

Figure 2. KTH Social course schedule detailed view (KTH Social schema föreläsning, 2012).

2.1.3 TimeEdit

TimeEdit is a scheduling tool developed by Evolvera. It is the official scheduling system in use at KTH. Events are automatically gathered from TimeEdit and loaded into the schedule function of KTH Social (*KTH Social för lärare*, 2012). Unexpected changes in the schedule at TimeEdit have to be noticed by the scheduling staff at KTH Social before they are updated in their schedule (*KTH Social – hjälpforum*, 2012).

2.1.4 Earlier research

Among earlier degree projects completed by Media technology students, two were found researching KTH Social. The first project, by Tove Attoff and Isak Engvall (*KTH Social – en portal med potential*, 2011), was discussing the possibilities of using KTH Social as a communication channel for programming laboratories guidance. The second, by Mikael Billfors Gustavsson & Joakim Kalcidis (*KTH Social – studenters förhoppningar om en ny social läroplattform*, 2011), investigated motivational properties in the platform and concluded that students get noticeably motivated if the platform facilitates their needs, helps them improve their studies and supports the communication between professors and students. Furthermore, the study showed that students are searching for a common study

platform, and that they are hoping that KTH Social will fulfill this. Both projects were found unrelated to our specific research area, the schedule function of KTH Social.

2.2 Time management

Time management methods will provide the foundation of the development suggestions made to the schedule area of KTH Social. Measurement methods that are explained here will be referred to in the methodology chapter. The benefits of time management will serve to validate the use of time management methods in the study.

2.2.1 Definitions

In the introduction, time management was defined according to Lakein's (1973) suggestion that it is concerned with the needs, goals, and the planning and prioritisation of tasks required to achieve these goals. Albeit important, this is still only one among many different definitions of time management. For instance, in one definition, time management is the degree to which individuals perceive their use of time to be structured and purposive (Bond and Feather, 1988, Strongman and Burt, 2000, Sabelis, 2001; Vodanovich and Seib, 1997). Lay and Schouwenburg (1993) describes time management as clusters of behaviour that are deemed to facilitate productivity and alleviate stress while Kaufman-Scarborough and Lindquist (1999) think of it as ways to assess the relative importance of activities through the development of a prioritisation plan. Claessens et al. (2007) chooses to combine and form a new definition of time management, based on the suggestions of other authors, in order to standardize the notion of time management for further research; "behaviours that aim at achieving an effective use of time while performing certain goal-directed activities" (Claessens et al., 2007, pp. 262).

For the purpose of this study, Lakein's (1973) definition is adhered due to its popularity and wide usage among authors and because it's components are in close relation to the process of scheduling (Claessens et al., 2007). Scheduling is defined as, among other things:

- A plan of procedure for a project, allotting the work to be done and the time for it
- Creating a timetable
- A list of tasks to be performed, especially within a set period

2.2.2 Time management methods

To achieve an effective use of time when performing an academic duty, there are several different time management behaviours that have to be taken into consideration. One of these is time assessment behaviour, which aims at awareness of the past, present and future (Kaufman et al., 1991). Planning behaviours such as: scheduling, settings goals, planning tasks in calendars, prioritising, making to-do lists or grouping tasks further aim at an effective use of time (Britton and Tesser, 1991; Macan, 1994, 1996). Britton and Tesser (1991) stated in a study that short-range planning was considered a more effective time

management technique than long-range planning, because plans could be adjusted to fast changes or unpredictable situations, which allowed for flexibility (Claessens et al., 2007). Nowadays, mobile technology has enabled an increasing amount of mobile planning applications, such as Google Calendar, Wunderlist, Evernote or Getting-things-done applications, to enhance these planning behaviours.

2.2.3 Measuring time management

Several different measurement instruments can be used in order to determine the time management behaviour of individuals. According to Claessens et al. (2007) previous studies have mainly included self-report questionnaires, and only a few diary studies and experiments have been conducted. The types of questionnaires most commonly used are:

- The time management behaviour scale (TMBS, Macan et al., 1990)
- The time structure questionnaire (TSQ, Bond and Feather, 1988)
- The time management questionnaire (TMQ, Britton and Tesser, 1991)

Britton and Tesser (1991) initially employed a 35-item questionnaire on attitudes toward time management and planning the allocation of time. After factor analysis of this questionnaire, an 18-item scale, TMQ, was identified. TMQ consists of three subscales: a 7-item measure of short-range planning, a 6-item measure of time attitudes and a 5-item measure of long-range planning. These include questions such as: “Do you make a list of things you have to do each day?” or “Do you work on a major assignment the night before it is due?” (Trueman & Hartley, 1995). Macan et al. (1991) identified a four factor time management behaviour scale (TMBS) consisting of the following parts:

- Setting goals and priorities
- Planning and scheduling
- Preference for organisation
- Perceived control of time

The first three factors evaluate the extent to which time management behaviors are used rather than the individual’s interpretation of the effectiveness or appropriateness of such behaviors. TMBS has 33 items ranging from questions such as “do you set short-term goals for what you want to accomplish in a few days or weeks?”, to questions that assesses the participants’ perceived control of time such as “do you feel in control of your time?” (Macan et al., 2010).

2.2.4 Benefits of time management

When ninety college students completed a survey on time management in 1983, it became evident that three factors accounted for 36 percent of the variance among student grade point average (GPA); short-range planning, long-range planning and time attitudes. TMQ is built on and comprised of these factors. Out of these three factors, short-range and long-

range planning were kept for subsequent studies due to their higher correlation with data (Barling, Kelloway & Cheung, 1996; Trueman & Hartley, 1996). Britton and Tesser (1991) suggest that, in particular, the time management components labelled time attitudes and short-range planning are better predictors of student GPA than Scholastic Aptitude Test (SAT) scores. The conclusion is that time management practices can influence college achievement. Through the use of TMBS, Macan (1994) found that the subscale "setting goals and priorities", organising and scheduling, is positively related to perceived control of time. The participating students who perceived themselves to have control over their time also appeared to be more satisfied with their university than those who did not. Furthermore, there appeared to be a difference between the academic and job-related performance outcomes. College grades and study habits were positively related to time management behaviours, while the relation between time management behaviours and job-related performance were modest or even non-significant. Additionally, time management practices appeared positively related to for example health and negatively related to stress (Claessens et al., 2007).

2.2.5 Limitations of time management theory

As there is neither a unified definition, nor a theory on time management, it can be questioned whether how, or even if, time management works (Claessens et al., 2007). An area still in need of thorough research is time management with respect to actual outcomes; what effects the different practices have on short-term tasks, goals and the completion of these within the available time (deadlines). Thorough qualitative research studies, for instance diary studies, should be conducted in order to obtain valuable information about the application of time management behaviours in practice. (Claessens et al. (2007)

Macan et al. (1990) found in their study that the stress levels of students were most strongly correlated to the students' perceived control of time. This would suggest that regardless if one engages in time management activities and behaviours, such as making to-do lists or setting goals, one will still feel stressed if one does not perceive to be in control of one's time or have a good attitude towards time management. This further reassures the recurring theme in the research on time management behaviors that they do not work for everyone. (Macan et al., 2010)

2.3 Human-Computer Interaction

Hewett et al. (1992) offer a definition of Human-Computer Interaction (HCI):

“Human-computer interaction is a discipline concerned with the design, evaluation and implementation of interactive computing systems for human use and with the study of major phenomena surrounding them”

The concept of HCI originated from Man-Machine Interaction (MMI), which studies the interaction between man and machine in general. HCI was introduced in the 1980's as a concept including all important aspects of interaction between man and computer (Gulliksen and Göransson, 2002). The International Organization for Standardization (ISO) considers two of the most relevant topics of HCI to be usability and human-centered design.

2.3.1 Usability

Usability is a concept that can be difficult to visualise and comprehend. Therefore, ISO have phrased the following definition:

“The extent of which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use”

(ISO 9241-11 Guidance on usability, 1998)

This definition contains three keywords:

- Effectiveness - The extent to which a goal has been achieved or a task has been completed
- Efficiency - The extent of effort necessary to achieve the goal or complete a task
- Satisfaction - The level of satisfaction and positive feelings the user gets when using a system

This is a well-formulated and easily understood definition of what usability is, but it is not especially easy to work with. Gulliksen and Göransson (2002) suggest that a way of concretizing usability is to use Nielsen's definition of usability. Nielsen (1993) introduces the concept of usefulness and defines it as “the issue of whether the system can be used to achieve some desired goal” (1993, pp. 24). Further he breaks it down to utility and usability where utility is if the system has the functionality needed to achieve the desired goal. Usability can be broken down into five usability attributes: Learnability, efficiency, memorability, errors and satisfaction.

Learnability

Learnability is defined as how fast a user can learn how to use a system properly. It can be perceived as the most fundamental usability attribute since every user's first experience with a system is learning how to use it (Nielsen, 1993).

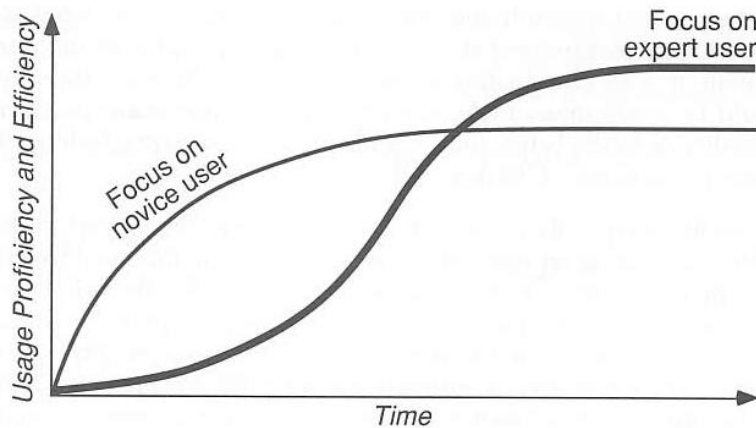


Figure 3. Learnability depending on target group of a system according to Nielsen (1993).

The figure displays learning curves of two hypothetical systems. The first focuses on novice users where the system has to be easy to learn but will be less efficient when mastered. The second focuses on expert users where the time needed to master the system is considered affordable in exchange for the high efficiency of the system (Nielsen, 1993).

Efficiency

Efficiency of a system is measured through how well an expert user can perform tasks within the system once the learning curve flattens out (Figure 3). There are two ways of deciding who is an expert user and who is not. The first is to take an informal approach, where the user's perception of knowledge is taken into account, as well as the amount of time that the user has been using the system, for example four years. The second way is to take a formal approach, where the number of hours spent working on a system, for example two thousand hours, is taken into consideration (Nielsen, 1993).

Memorability

Memorability refers to how easy it is to remember how a system works and how long time it takes to perform tasks after a period of time without using the system. This is important in systems which aren't supposed to be used frequently or in systems where it is common with longer time intervals without usage. Nielsen (1993) describes two ways of testing whether a system has good memorability. The first is through a standard user test with users who have been away from the system for a certain period of time, where the time it takes to complete tasks is measured. The second way is to let a user use the system to perform a task and when the task is completed, the user is asked to explain the effects, names and/or draw symbol of the commands used in the particular task (Nielsen, 1993).

User errors

User errors are actions that does not accomplish the desired goal; one example being misunderstanding what a function does. User errors can be broken down into two categories; those which decrease efficiency of the system and those with catastrophic

consequences. Catastrophic consequences are consequences of user errors which cannot be recovered. When analysing occurring user errors, those with catastrophic consequences should be differentiated from the ones that only decrease the efficiency (Nielsen, 1993).

Satisfaction

Satisfaction is concerned with the users' feelings about a system. Does the user find it pleasant to work with? Does the user like the system? The user's opinion about the system is subjective although an average of all users' subjective opinion generates an objective answer of how pleasant it is to use the system in general (Nielsen, 1993).

Satisfaction questionnaires are usually short and based on Likert scales or semantic differential scales, which will be described in further detail chapter 2.4.1 Questionnaires theory. It can be considered common that users, when answering satisfaction questionnaires, are aware of what kind of results are considered good or bad. Therefore their answers tend to be too positive or too negative. This has to be taken into account when analysing the replies of a satisfaction questionnaire for a single system (Nielsen, 1993).

Attributes of Nielsen's concept of usability will be used in the methodology and in the development suggestions.

2.3.2 Human-centered design (HCD)

The Human-centered design (HCD) method of designing a system perceives the user as central in the design process. The users know what their needs, goals and preferences are, and it is up to the designer to find out this and take it into account when designing the system. The HCD method allows the designer to focus on what have to be accomplished, i.e. the goals. The designer then determines what have to be done in order to achieve these goals, having the users' needs and preferences in mind (Saffer, 2010).

User data is important for determining how a system should be designed, as it is the users' opinions that are central for the HCD approach (Saffer, 2010).

HCD will be a central concept in this study and will be considered in the choice of methodology and will be used in the decision of development suggestions.

2.4 Questionnaire theory

Scale measuring

The Likert scale and the semantic differential scale are two ways of subjectively measuring user opinions. Differences between the scales are presented in figure 4.

Table 1
Examples of item transformations from a Likert to a semantic differential format

		Not true at all							Very true
<i>Likert format</i>									
I feel that my future looks promising		1	2	3	4	5	6	7	
It is easy for me to think of good conversational topics		1	2	3	4	5	6	7	
<i>Semantic differential format</i>									
I feel that my future looks	<i>uncertain</i>	1	2	3	4	5	6	7	<i>promising</i>
To think of good conversational topics is	<i>easy for me</i>	1	2	3	4	5	6	7	<i>difficult for me</i>

Figure 4. Likert scale converted into semantic differential scale.

According to Friborg, Martinussen and Rosenvinge (2005) people react more homogeneously to the semantic differential scale than to the Likert scale. The measurement scales used in this study will be a combination of semantic differential scales and Likert scales to prevent acquiescence in the answers which is a problem when only using the Likert scale (Friborg, Martinussen, Rosenvinge, 2005).

3. Methodology

In this section the process of the study will be described, with the purpose of providing a view over how data has been collected throughout the study. We will refer to theories from the previous chapter when they are employed in the methods.

After researching theories in the literature studies, an e-mail interview with the product owner and project leader of Virtuellt campus, was held. The e-mail interview served as a pre-study when deciding the approach of the remaining study. After receiving input from the e-mail interview, a focus group was formed, containing three students at KTH. The objective of the focus group was to discuss the schedule area of KTH Social with the purpose of obtaining valuable feedback on the questionnaire design. It was also desired to gather ideas for development suggestions of the schedule. The purpose of the questionnaire was to build a foundation of subjective opinions about the schedule area from students at KTH. All methods were conducted with the four sub questions of the problem definition in mind.

3.1 Literature studies

To find accredited research for the literature studies, academic search engines such as Google Scholar and KTHB were used. It was essential for us that the literature used in this study had been credited to ensure the quality of the work. These search engines made it easy to determine whether a study or an article had been credited. Common search keywords were “usability”, “human-centered design”, “human-computer interaction” and “time management”. Human-computer interaction books were used to find useful theories and to discover other studies and literature within the field.

3.2 E-mail interview

As a pre study, a semi-structured e-mail interview was conducted with Lina Magdalinski, product owner and project leader of Virtuellt campus. The purpose of the interview was to get early input regarding KTH Social and whether Magdalinski, in the role as a project leader of Virtuellt campus, has an interest in taking part of the results of our study. The interview questions discussed for example: internet visitor information of KTH Social, how professors use study platforms, and common difficulties among students regarding course information.

3.3 Focus group

Three students at KTH participated in the focus group. They were hand-picked because of their knowledge in human-computer interaction. This attribute was highly valued when we decided to request their participation. The focus group provided a foundation for the rest of the study, by engaging in discussing topics such as HCI-aspects, course information and the structure of the questionnaire. A number of questions were formulated to make certain the discussion would stay on topic.

The focus group discussion, which lasted approximately 90 minutes, was audio recorded and supported with notes about interesting subjects and time stamps in order to ease managing the data. Afterwards, the relevant focus group audio data was transcribed to provide us with an overview of the material.

The purpose of the focus group was to clarify the participants' knowledge about the schedule of KTH Social and to provide information on how they were using the schedule. The participants were also asked to give feedback on their experiences with the schedule and to discuss which course information alternatives should be presented in the questionnaire. In addition to this, the participants also contributed with development ideas which were a valuable input for the questionnaire.

3.4 Questionnaire

The questionnaire is based on the theory chapter and on the focus group. It consists of three sections. The first section of the questionnaire intended to examine the students' usage habits of the schedule area and gather information about the students' subjective opinions of the usability. It also investigated which course information students would prefer to see in the lecture detail view in the schedule. In the second section, which was concerned with development suggestions, data gathered from the focus group was used to formulate the questions. The final section covered the students' study habits and how they plan and manage their time (see Appendix – Questionnaire).

The semantic differential scale used for the purpose of this study with values between 1-6, 1-7 and 1-8. The semantic differential scale of 1-8 was used on the section of usability because a wider range of options was considered necessary when asking the participants for their subjective experience of the schedule area. In the range of 1-8 it is not possible to be completely neutral which was important in order to force the participants to give it an extra thought. The 1-7 scale was used for development suggestions. The purpose of using a 1-7 scale was because we wanted the students to be able to be completely neutral. The 1-6 scale was used in the course information section where six alternatives was enough to fit the desired possible answers.

Likert scales were used on questionnaire items where semantic differential scales were deemed unsuitable in the form system. Sections with an abundance of item options, such as the *important course information*, were considered more suitable to present in Likert scale, due to the space requirements. The section *Study habits and time management* was also chosen to be queried in Likert scale format since it was of similar structure to *important course information* and would be compared for correlation with it.

3.4.1 Usability of the schedule area and course information

This section's questions related to usability were based on Nielsen's (1993) theory of usability, which was brought up in the theory chapter (see chapter 2.3.1 Usability). Data concerning the students' usage habits of the schedule area was gathered in order to get an understanding of their user experience. This was considered substantial in order to evaluate the usability. Gathering information about the usability was crucial for the study and was therefore featured as early as possible in the questionnaire. This section of the questionnaire will be analyzed in order to identify the possible weaknesses of the system. The questions regarding the course information will be critical in order to determine what the students want to visualise and find in the lecture details in schedule. This will also be imperative when constructing a template for the professors on how they are advised to structure their course information and schedule layout.

3.4.2 Development ideas

Since development ideas were discussed and inspired by the focus group, they were also included in the questionnaire. This section was not originally intended to be a part of the questionnaire but after the focus group was held we decided that it would be beneficial for this study to include it.

3.4.3 Study habits and time management

In order to determine the development suggestions for the schedule function, it is important that we gather information on how students prefer to handle time management in their free time. By correlating questions of time management to the questions regarding which course information should be visualized in the schedule, we can determine whether students want the information because they need it rather than just think others need it.

The study habit and time management part of the questionnaire was constructed using examples from the earlier mentioned time management questionnaire types: TMQ and TMBS (see chapter 2.2.2 Measuring time management). The items in this section investigate factors such as short- and long range planning (TMQ), setting goals and priorities, scheduling and perceived control of time (TMBS), all of which are beneficial to students (see chapter 2.2.4 Benefits of time management). The scale of the statements regarding study planning measure from 1-8, where the following applies to each range: False, not like me: 1-2 (This statement does not describe me at all; it is not like me), 3-4 (More false than true), 5-6 (More true than false), 7-8 (This statement describes me very well; it is very much like me) True, like me.

3.5 Ethical issues

Out of the three main areas of ethical issues, consent was considered the most relevant regarding the e-mail interview. It was made sure that the interviewee realised that her statements may be used in the report. A finalised result text of the interview was sent out along with a request for her consent in the statements being included in the report. After some minor changes and clarifications in the text, she agreed to it being included in the study. The remaining two areas of importance are confidentiality and consequences (Cohen, 2000). The aspect of confidentiality was considered crucial when sending out the questionnaire. A description regarding the ensured anonymity of the respondents was included in the information text presented at the start of the questionnaire.

4. Results

The results from the different research methods presented in this chapter will not be treated in the same way. The e-mail interview and focus group will mainly be considered as complements to the questionnaire, which will be the main source of information in the discussion.

4.1 E-mail interview

As the purpose of the study was presented to Magdalinski she expressed an interest in taking part of the main features of the study results. She wanted to see what the study deemed the biggest issues of the schedule area today, linked to course information and lectures. On the question regarding the internet visitor information of KTH Social, she presented statistics from Google analytics. Virtuellt campus started using Google analytics at the end of March 2012. Both traffic information regarding visitors of KTH Social and usage statistics have been gathered. The usage statistics include measurements of the frequency of posted content, page edits and user comments. Together, this information amounts to an increased usage of KTH Social as a study platform at KTH.

In the chart below (figure 5) the mean number of daily active courses is presented for each month. An active course is a course whose page has some kind of activity registered during the day.

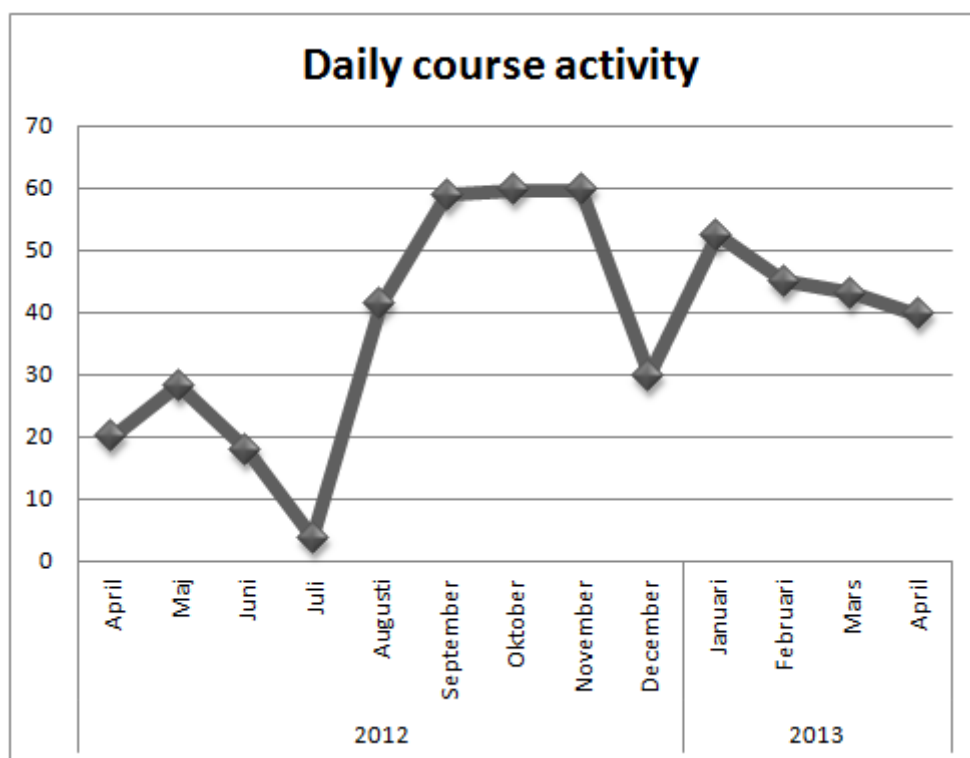


Figure 5. Daily course activity (KTH Social, statistics, 2013).

The chart (figure 5) shows that the daily course activity during april 2013 has increased with 97.8 % in relation to april 2012 which indicates an increased usage of KTH Social. According to Magdalinski, professors have a large freedom of choice when it comes to selecting which study platform to use and what course information should be visualised on KTH Social. When asked about which the biggest issue for students regarding course information was, she answered that it was the confusion over unclear course information. The location of course information varies over platforms and sometimes the information is missing or contradictory.

“This is information we have obtained when talking to students and through the moderation that occurs in the course web on KTH Social.”

Magdalinski states that the development group Virtuellt campus have not received much “direct feedback from students” regarding the issues students encounter in the study platform. By “direct feedback” she clarifies that they do have received direct feedback from students, but that the initiative have come from Virtuellt campus’ side, and not from the students’. She continues by stating that they have not been contacted directly by students to any large extent, but have instead sought and received “quite an amount of direct feedback” themselves from students.

Regarding the schedule area of KTH Social, Magdalinski said that there was a desire from students that professors should be able to edit information directly onto the schedule. Another request was that information regarding location of the classrooms should be visualised in the schedule. Overall, the schedule was considered a prioritised area among students. During the beta process of the personal menu, some students commented that they wanted to have a calendar view of the schedule rather than a table view. Virtuellt campus thought to solve this by implementing the export function, but realised that the question of view mode is something worth regarding for the further development of the schedule area of KTH Social.

4.2 Focus group

The opinions of the three students participating in the focus group were in general reinforced by the results from the questionnaire. Statements which will be used in the discussion will be brought up in this subchapter.

One student said that the estimated study time to complete a task is an individual aspect and cannot be determined easily.

The idea of a timeline, visualising the time span of the course, with dots representing events (tasks/deadlines/presentations) where bigger dots are more important, was brought up. This

received positive feedback in the focus group and it was considered important that the dots were of different sizes depending on the importance of the event.

Every participant was positive about the idea of colour coding the schedule if it could be done in an appealing and consequent way. One student thought it would be difficult to colour code the schedule in its current form, but that it would be more appealing to use colour coding a calendar view was to be used.

One of the participants of the focus group brought up the issue of professors not being able to edit any lecture or class information in the schedule, except for lecture details. The student described a situation where a professor had to edit the lecture details because the classroom had been changed. The changes in the details were overseen by students because it did not show unless the students clicked the “view details”-button on the specific event.

4.3 Questionnaire

The results presented in this subchapter will be considered the foundation and the most valuable data for the discussion and conclusion. It will be presented section wise, one section of the questionnaire at a time. 22 students participated in the questionnaire. The participants were anonymous and not asked for age or gender. They were reached through channels which ensured that they were students at KTH.

4.3.1 KTH Social

As an introductory topic, common questions about KTH Social were brought up at the start of the questionnaire. The students were asked if they had knowledge about the existence of a development group for KTH Social, named Virtuellt campus. It turns out the development group Virtual Campus was not well-known among the students, 2 out of 22 students knew about it. None of the students had interacted with the group in any sort of way.

When asked about whether they had used the schedule at KTH Social at some point, 17 students answered positively. Two students in total answered that they knew about the information page explaining how the schedule works.

On the question regarding knowledge about the possibility to synchronize the schedule with a number of different applications, such as Google Calendar, Outlook and Webmail, 16 students answered that they knew about this function. 9 out of those 16 students submitted that they are currently using it. Eight students use it together with Google Calendar and one student uses it with Apple’s counterpart iCal. The reasons for not using the synchronization function were varying. The most common reason (four students) was that they were satisfied with the way that they managed their schedule today. Two students did not use it because they did not know of its existence while one student claimed to be too lazy.

Figure 6 below shows how well the students think the synchronize function works with the application they use.

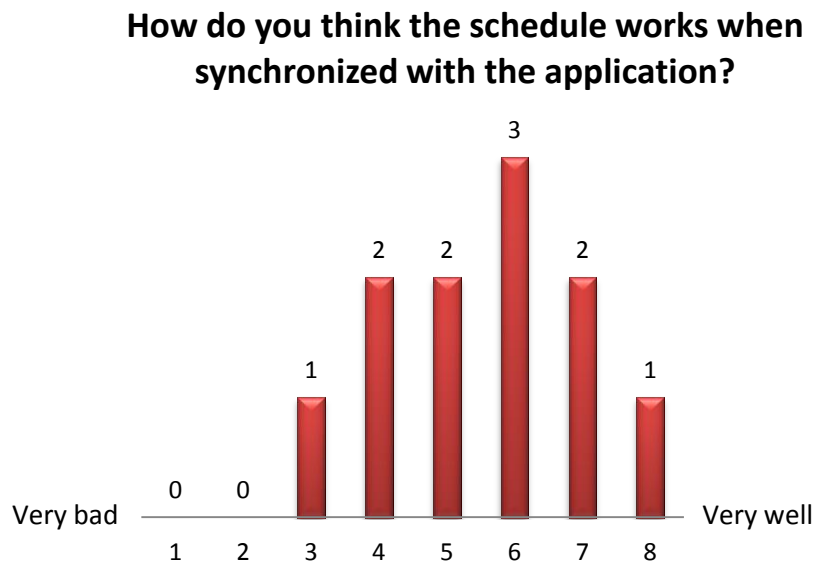


Figure 6. The synchronization function of the schedule.

8 out of 17 students, who had used the KTH Social schedule, had at some point experienced user errors when using it. Among the students who had encountered user errors, everyone except two explained what kind of errors they had encountered. It turned out that there were almost as many user errors as students answering this question. There were five different user errors among the six students.

- Two students had experienced issues with the permission of accessing courses.

“Depending on which course, it can be quite troublesome to access information quickly when you sometimes have to be logged in, which I am not at all times”

- Two students had the impression that the schedule’s synchronization with Google Calendar was so slow that it could be considered a problem.
- One student experienced issues regarding the layout of the schedule; that you had to scroll down in the schedule view in order to find and reach the current lecture. This was actually a development suggestion later in the questionnaire, where the students were given the opportunity to contribute with their opinions.
- One student considered it problematic to understand which classroom to go to when more than one course round was being held and therefore more than one classroom was being shown in the schedule.

- One student considered it problematic to add courses.

In the usability section, answers regarding how students experience the interaction with the schedule were received. The following was determined by viewing the opinions of the 17 students who had used the schedule on KTH Social.

The students were presented a statement regarding the efficiency of the schedule in terms of achieving a certain goal within the schedule area; "it is fast and efficient for the students to find what they are looking for in the schedule". The mean value of student answers was rounded up to 5.1 on an 8-graded scale (1, "completely disagree" and 8, "fully agree").

On the statement "I experience the schedule area of KTH Social to be:", the mean value of how difficult or easy it was for the students to understand the schedule area was rounded up to 5.2 on the 8-graded scale (1, "difficult to understand" and 8, "easy to understand"). Following the same statement but with answer alternatives relating to the navigation of the schedule area, the mean value of the students was rounded up to 5.1 on an 8-graded scale (1, "difficult to navigate" and 8, "easy to navigate").

Lastly, a statement regarding the students' overall experience of using the schedule function of KTH Social was presented. The overall experience of the students had a mean value of 4.3 on an 8-graded scale (1, "negative" and 8, "positive").

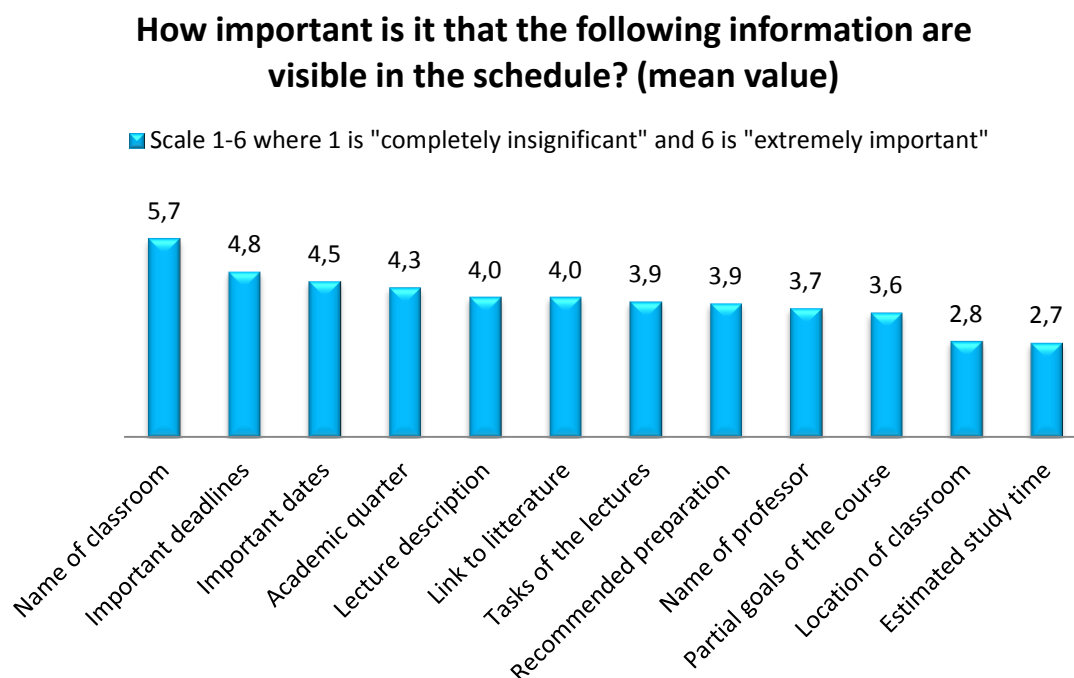


Figure 7. Important course information diagram.

The importance of various types of course information to be visible in the schedule is presented in the chart above (figure 7). “Name of the classroom” was by far the most important information with a mean value of 5.7, with 6 being the highest value. “Important deadlines” and “important dates” followed as second and third with mean values of 4.8 and 4.5. Whether a class has academic quarter or not received a mean value of 4.3 which makes it the fourth most important information that students thought should be visualized in the schedule. Lecture description, link to literature, recommended preparation and tasks of the lectures all received mean values of 3.9-4.0. Name of professors received a mean value of 3.7 and partial goals of the course received 3.6. The information considered least important was location of classroom and estimated study time with mean values of 2.8 and 2.7.

4.3.2 Development suggestions for visualisation of the schedule

The students’ thoughts about the development suggestions in the questionnaire are presented below.

When asked about which alternative the students would prefer as view of the schedule of KTH Social, they were presented with five options: Standard view (the current view), compact view (fewer details than standard view), calendar view (more overview) and a view with the possibility to switch between the previous view modes. Additionally, an “other” option was presented, in which students had the ability to submit their own view alternative. 17 of the students wanted the ability to switch between the different views while 4 students preferred the calendar view and one student preferred the current standard view. No student chose the option of formulating their own view alternative.

In the four following charts, the results regarding students’ opinions about the development suggestions are presented:

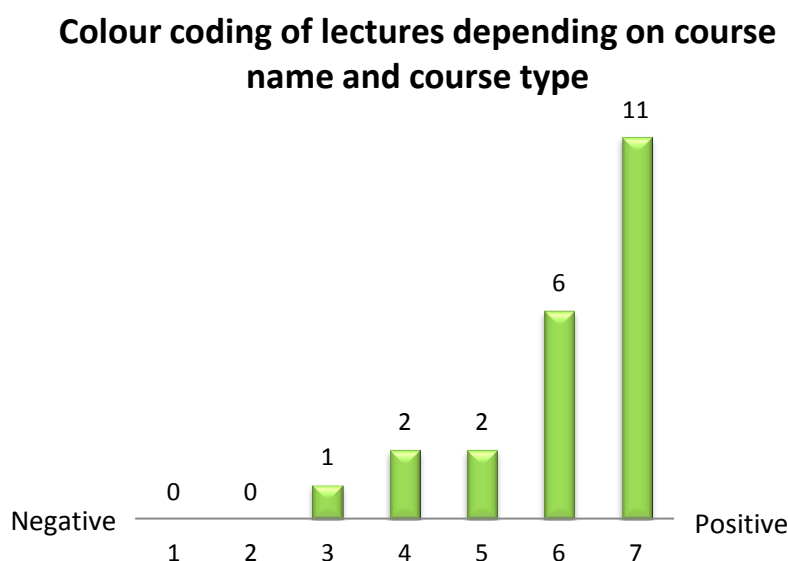


Figure 8. Colour coding in the schedule.

With a mean value of 6.1 (figure 8) rounded up, the students considered it to be a positive change with colour coding by course name or course type.

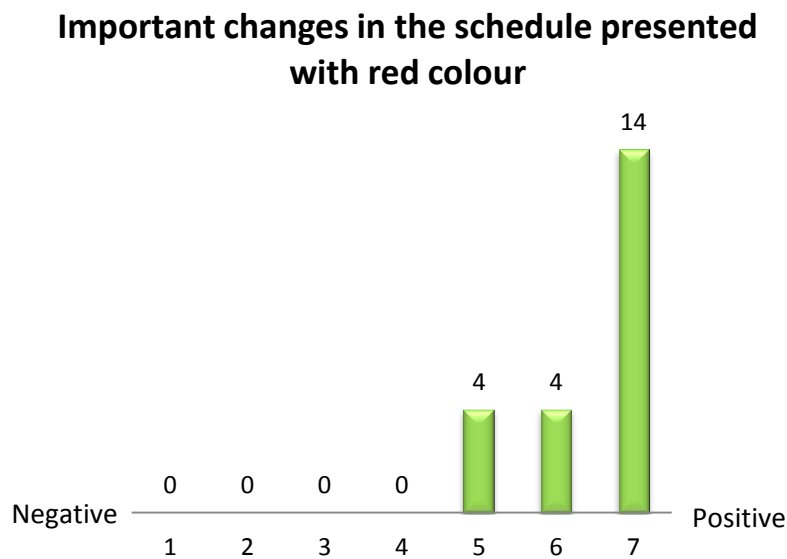


Figure 9. Important changes in the schedule.

The students responded positively to the suggestion of colour coding lectures (figure 9) which have been rescheduled with a red frame. The results measure a mean value of 6.5 rounded up.

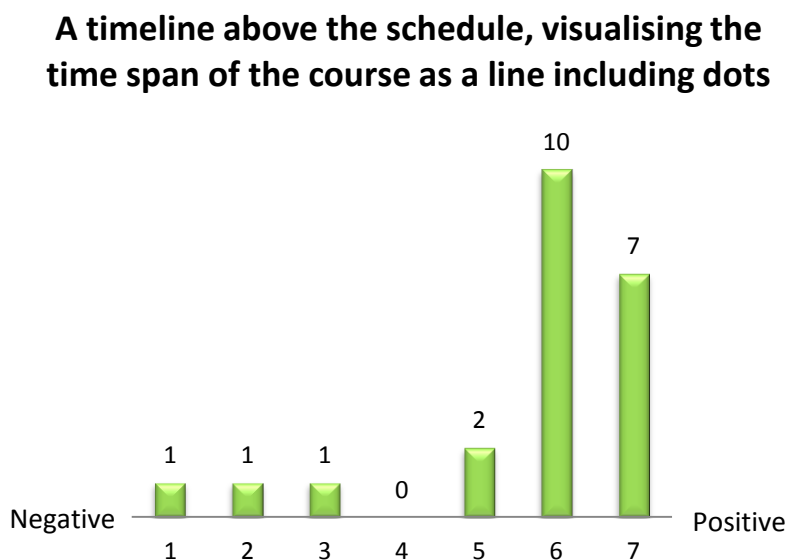


Figure 10. Timeline as development suggestion.

The suggestion of a timeline to improve the overview of a course was received mainly positively (figure 10) with a mean value of 5.7 rounded up, although three students thought negatively upon the suggestion.

Course schedule focused on current lectures

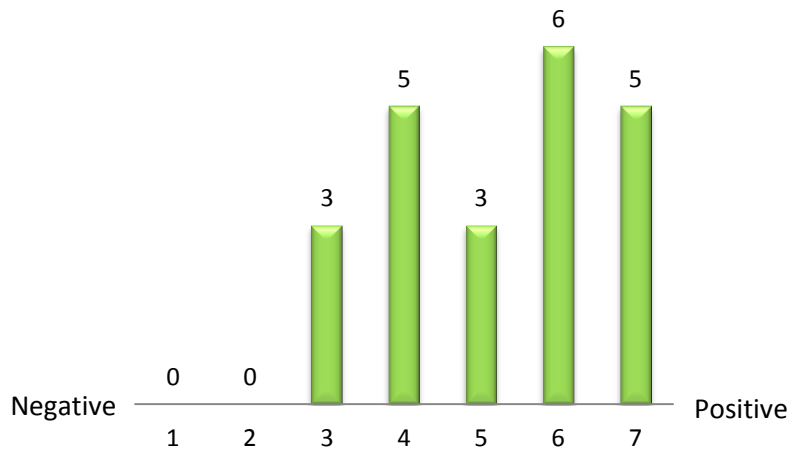


Figure 11. Current lecture focus.

The students were generally positive to the development suggestions and the suggestion which they were least positive to was that the schedule should be focused on the current date and lecture (figure 11). This suggestion received a mean value of 5.2 rounded down.

Four of the students participating in this questionnaire contributed with further comments or suggestions of their own. A summary of their suggestions follows below:

- The timeline should include a dot that shows where you are in the course round to visualise how close you are to the time-consuming moments and deadlines of the course.
- Improved overview with important functions clearly visible.
- A schedule view similar to the TimeEdit view would be practical.

4.3.3 Study planning and time management

How students plan their studies varies in a numerous different ways. As seen in the chart below (figure 12), each alternative is being used by students. It was possible to choose more than one alternative and the most common way to manage study planning among the students was to set up short term partial goals. This method was used by 13 out of 22 students. The second most common way was to set up to-do lists (daily, weekly or long term, or a combination of these) which 11 students used to manage their studies.

How do you plan your studies?

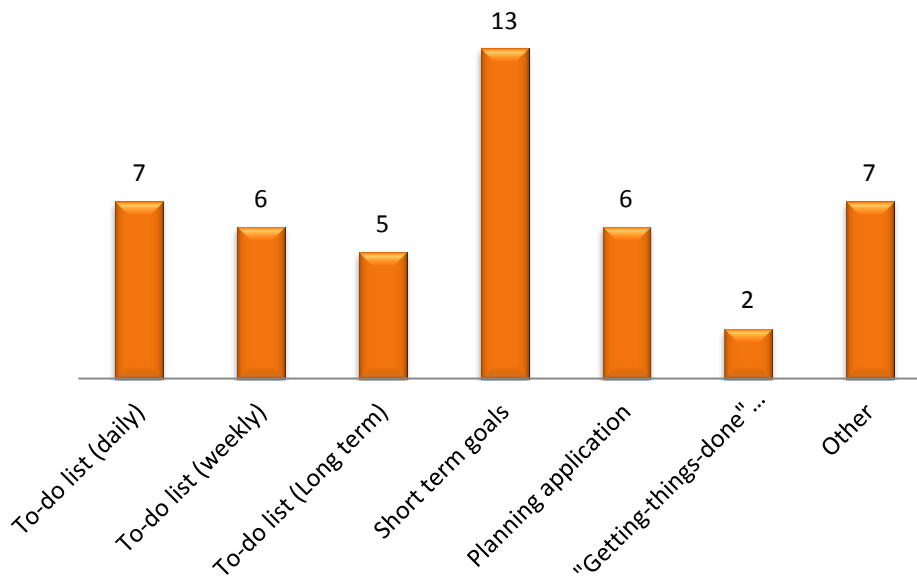


Figure 12. Methods of study planning and time management.

The majority of student study methods (19 out of 22) falls under the categories A, B or a combination of A and B (see figure 13, below). The correlation between the most used study methods and time management behaviours is presented by their mean values in the following chart (figure 13). The scale 1-8, ranges from false to true regarding the statements listed; see chapter 3.5.3 *Study habits and time management* for details regarding measurement scales.

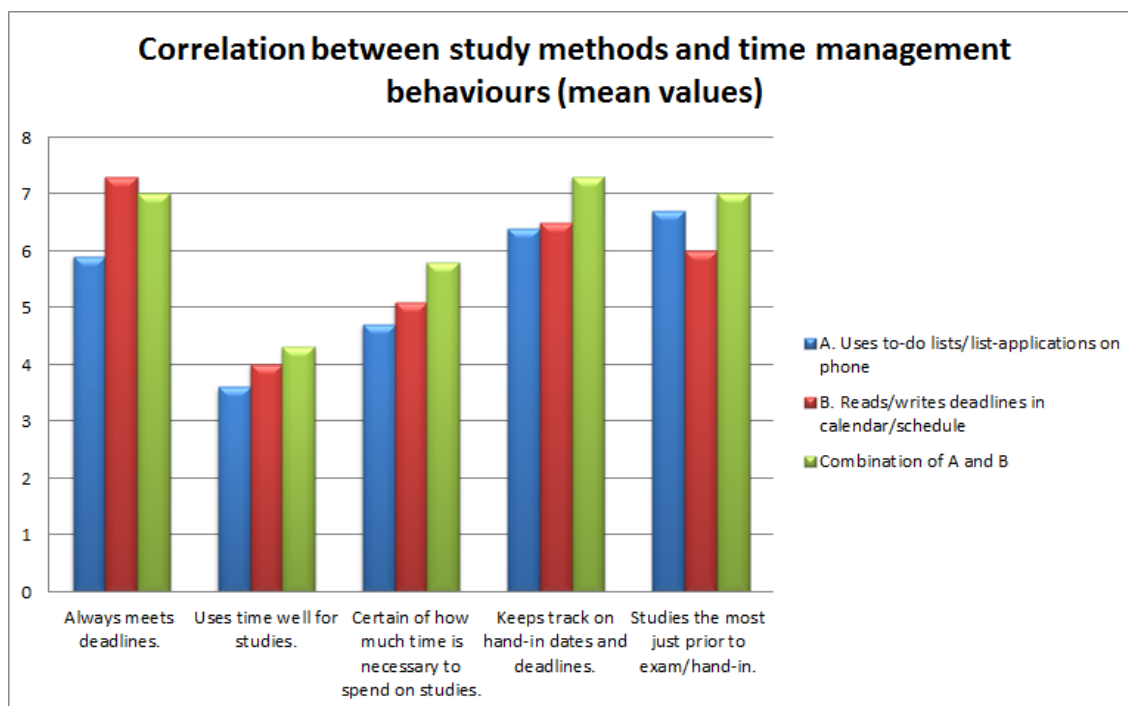


Figure 13. Study methods and time management behaviour correlation.

The correlation between students' study habits and course information is visualised in the following chart by their mean values (figure 14). The yellow scale ranging from 1-8 (false to true) represents how well the students consider their study habits to be; *I always know where to find valid course literature, I read/do recommended pages/problems before a lecture, I am certain how much time I have to spend on study tasks, I am certain when academic quarter applies, I always know the way to the classroom, I always know which classroom to go to, I always keep track of upcoming deadlines.* The blue scale ranging from 1-8 (completely insignificant to extremely important) represents how important the students thought specific course information was, to be visualised in the schedule area at KTH Social (see figure 7, chapter 4.3.1 KTH Social).

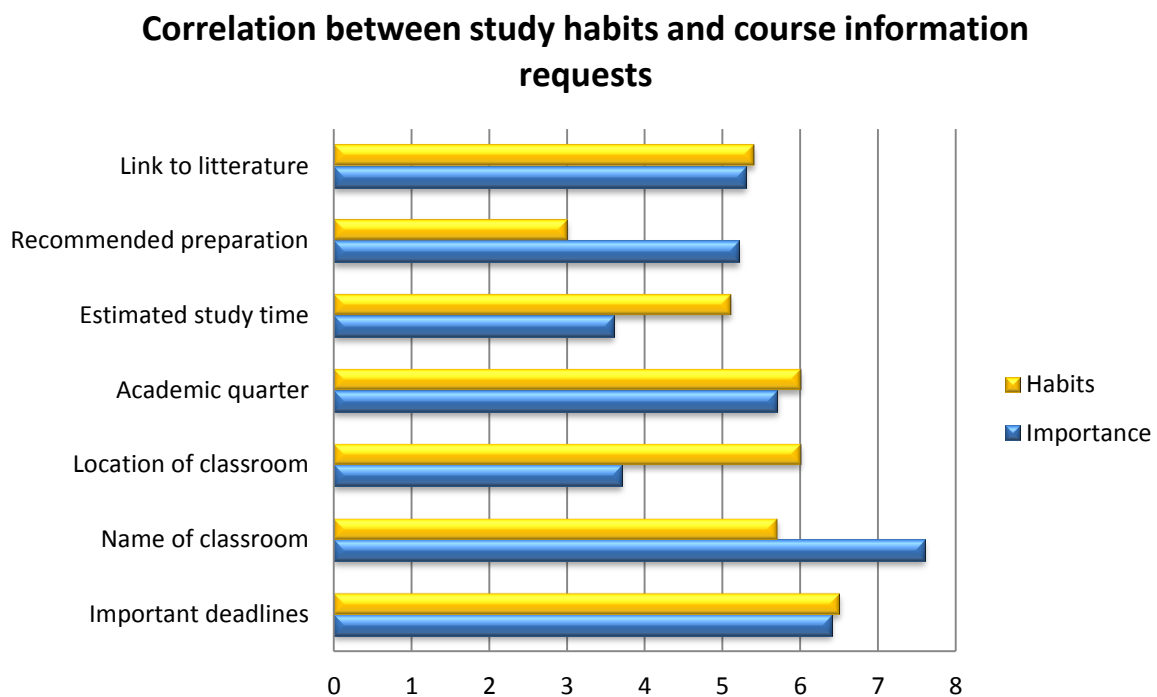


Figure 14. Correlation diagram.

5. Discussion

In this section we analyse and discuss the results obtained in our studies. The chapter is divided into three subchapters: Prestudy, discussing the qualitative results from the e-mail interview and focus group, Subquestions, analysing the HCI aspects of the focus group and the results from the questionnaire and Methodology evaluation, criticizing the methods utilized in this study.

5.1 Pre-study

The interview with Lina Magdalinski, product owner and project leader of Virtuellt campus, provided us with valuable information regarding the focus of the study. It needed to be clarified that there was a need for this type of study to be conducted, and that the schedule area is considered important to students. Magdalinski's statement regarding the lack of direct feedback obtained from students on the development of KTH Social is something we hope to aid Virtuellt campus in. This is done by conducting a study acquiring more than just occasional student responses. The increased activity on KTH Social further cements our view of it as a study platform with room for development and improvement. Professors' freedom in adding course information to the schedule area is essential for the possibility of us presenting a template with guidelines for professors, regarding which course information should be visualised in the schedule. The template will hopefully work in the direction of solving the issue of unclear course information by providing consistency to the information shown in the schedule.

By discussing the following sub questions we seek to answer the problem definition:

- What kinds of issues occur in the schedule function today?
- What functions are needed to facilitate the students' study planning?
- What kind of course information needs to be visualised?
- How can the course information be visualised in a user friendly way?

5.2 Issues and user errors in the schedule area

Out of the 17 students, who at some point had used the schedule function, there were eight who had experienced some sort of issue when using it. User errors and issues will most likely always appear in a system and it can be argued whether this is a good result or not for KTH Social if the sort of user error is not known. However, the participating students described what kind of user error they had encountered, and none of these could be seen as catastrophic. This means that none of the students had encountered any sort of catastrophic user errors. The encountered issues and user errors were instead perceived as decreasing the efficiency of the schedule area which cannot be considered crucial to rectify immediately. They are however decreasing the efficiency and should be rectified.

Another issue is permission, which is a balance between what can be displayed to the public viewer and enabling the possibility to access information quickly without logging in. This should be looked over to make sure that all information, which in a legal perspective can be accessed without logging in, actually are accessible.

Having to scroll down in the schedule to view the current date was not appreciated by one student in the questionnaire and the participants in the focus group all agreed that it was something that should be changed.

The schedule has to become clearer regarding which classroom belongs to which course round, when there are multiple course rounds of one course during the same period. For example in some math courses all the classroom names are shown in the schedule but it is not possible to connect the classroom names to the course rounds, leaving the students unaware of where they are supposed to be.

The mean value of the efficiency of the schedule area was rated 5.1 on an 8-graded scale by the students. It is not a great result for KTH Social, however it is likely that the students figured out the purpose of this study and therefore answered more negatively. If this was the case the rating of the efficiency would correlate better to the user errors which were described earlier.

The students were not satisfied with the schedule area. The mean value was only 4.3, on an 8-graded scale, when the students were asked for their overall experience. This indicates that there are several user errors and other flaws that need to be resolved in order to improve the efficiency. We cannot determine all of these issues but those mentioned earlier in this section (5.2 Issues and user errors in the schedule area) are determined in this study as user errors of less importance and should be treated as such, meaning that these issues should be considered when developing for better efficiency.

5.3 Facilitating students' study planning

The way of study planning among the students turned out to be unique for nearly every student. Each student had its own way of planning their studies and managing their time. The majority of the results could however be categorised into three classifications: students who use to-do lists or list-applications (group A), students who read or write deadlines in their calendar or schedule (group B), or students who utilize both these methods (group C). The results of the correlation between the study methods and time management behaviours of the students show that there is an insignificant difference between how the different types of student study methods relate to perceived time management and study situation. Group B has a slightly higher result in perceived deadline completion compared to group A, which makes sense considering that group B's study method is focused on reading/writing deadlines in calendars/schedules. Overall, Group C has slightly higher values compared to A

and B, but should not be given too much attention, considering that Group C consisted of half the amount of students of either A or B (4 compared to 7 or 8).

Generally, the students perceived themselves as poor to average time managers who study more the closer they are to a deadline. However, they still felt as they were keeping track on hand-in dates and meeting deadlines most of the time. The students varied from not very to very certain of how much time it is necessary that they spend on studies. They were however, unsure regarding when it is recommended to start studying for an exam or hand-in.

The results suggest that there is room for improvement regarding how students perceive their use of study time, and that they are not sure about which amount of effort they should put into their studies. When comparing this with the *important course information* results, *recommended preparation* visualised in the schedule was somewhat interesting to students while *estimated study time* was uninteresting. The lower results in knowledge of the estimated study time required may therefore have grounds in a disinterest among students to learn about managing their time for the sake of studying. In order to facilitate the students' study planning and implement study methods in the schedule, a focus on recommended preparation for lectures should be visualised in the schedule. Furthermore, an implementation of study methods similar to what the students regularly use, like to-do lists and deadlines inside the schedule, may aid the students in managing their time.

5.4 Visualisation of course information

Since Human-Centered Design is a central part of this study the users' opinions are valuable and what they consider being important in the schedule will be an essential part of this sub chapter. The correlation diagram (figure 14) between study habits and course information requests will be used to determine how well the course information is known among students today in relation to the importance of it being visualised in the schedule of KTH Social, according to the students. The correlation is being visualised like this to facilitate the analysis of the results. The course information attributes where the "importance-bar" is significantly longer than the "habits-bar" will be prioritised since this is information that is considered to be important to receive from the schedule, but the students' estimated awareness of this information is not that high in relation. Course information attributes where the opposite relation can be seen will not be considered as issues in the current schedule.

5.4.1 Course information

It was not a surprise that *Name of classroom* was considered the most important information. Although, as seen in the correlation diagram (figure 14), when the students estimated their own awareness of which classroom to go to and how important they thought it was that the

name of the classroom was shown in the schedule, there is a significant difference between the two bars. This means that it is not always clear enough which classroom to go to. This can most likely be related to the opinion of one of the students, expressing the problem of knowing which classroom to go to when there are multiple course rounds, of the same course, being held at the same time.

Cementing the conclusion from chapter 5.2, *recommended preparation* was highly important course information according to the correlation diagram. *Location of classroom* and *Estimated study time* were also not considered important in either the correlation diagram (figure 14) or the *important course information diagram* (figure 7). *Academic quarter*, *Link to literature* and *Important deadlines* are examples of course information that the students generally are keeping track on, but still wish to visualise in the schedule.

Other highly rated information represented in the *important course information diagram* is *important dates*, while students considered *lecture description and tasks of lectures* somewhat important. *Name of professor* and *Partial goals of the course* were placed in the middle of the scales on the *important course information diagram* and can then be considered neutral or in some cases redundant, according to students.

When summing up the established course information data; Name of classroom received the highest rating, both in the *correlation diagram* and the *important course information diagram*. *Name of classroom* is one of the obligatory attributes when submitting a schedule request as a professor. This has served as a benchmark for us when comparing and validating the students' responses on the questionnaire.

In the list of non-obligatory course information deemed the most important for students, *Important deadlines* and *Important dates* were the second and third most important, closely followed by *Recommended preparation* and *Link to literature*. *Important deadlines* were uncorrelated in the correlation diagram and thereby regarded as slightly less important. The latter two alternatives were highly rated because of their correlation with the students' unawareness of the information. *Academic quarter* was considered important in the *important course information diagram* but uncorrelated to students' awareness, in that students seemed to be well aware of when academic quarter applied, but still wish for it to be visualised in the schedule. At last, *Lecture description* and *Tasks of the lectures* were considered somewhat important to be visualised in the schedule of KTH Social.

5.4.2 Course information template for professors

This chapter presents a template with guidelines for professors, advising on what information is relevant to students in the schedule and how to structure this course information when uploading it to the schedule.

This template is meant to provide an insight for professors on what students want to see when they click to view lecture details on the synchronised calendars or enter into lecture detail view in the schedule on KTH Social. Because the information is adjusted to fit inside the lecture detail area of the schedule, information regarding *important dates* will be excluded in this template. *Name of classroom* is already obligatory in the course information in the schedule so that will be excluded as well. Information regarding *Important deadlines* should be posted in the lecture details view on the actual deadline date of the lecture, as to avoid requiring space in other lecture details. Due to its high importance among students and the minimum size required in text, information regarding *Academic quarter* should always be posted directly underneath the obligatory course information, such as date, time, classroom, name and type of course.

Course information in the template is written down in order of importance to students.

Template:

- Information regarding whether academic quarter is applied or not.
- Recommended preparation for lecture/class (which pages to read or math problems to solve before attending lecture/class)
- Links to course- and lecture literature
- Lecture description (a compact description of what the lecture/class will be about)
- Tasks of the lectures (what pages/math problems will be addressed on the lecture/class)



KURS
Envariabelanalys

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Föreläsning

☒ Visa i min kalender

Tid: Tisdag 24 januari 2012 kl 10:00 - 12:00

Plats: FL-3-221 (3-221H)

Moment: Föreläsning

Starttid: 10:15

Rekommenderad förberedelse inför föreläsning:
Gränsvärden vid oändligheten och talet e. Kap 2,1 & 2,3

Länkar om ämnet:
https://www.khanacademy.org/math/calculus/limits_topic/limits-infinity/v/limits-and-infinity
<http://www.youtube.com/watch?v=aExe0DbzGsg>

Beskrivning:
Under denna föreläsning kommer det gås igenom grundläggande begrepp inom gränsvärden samt introduceras till talet e. Vi kommer att få besök av en gästföreläsare från MIT som ska ge sin bild av hur gränsvärden bäst används i skapande av algoritmer och funktioner.

Planerade uppgifter för genomgång:
212, 219, 233, 237, 239

Synlighet
Hela världen får läsa.

Taggar
Saknas än så länge.
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Senast ändrad
2011-11-16 13:11.

FÖLJ DENNA HÄNDELSE

ANMÄL MISSBRUK

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Figure 15. Course schedule detailed view according to template.

Figure 15 above is an example of what the course schedule detailed view, depicted in chapter 2.1.2 Schedule, could look like if the professors uploading the course information would have followed the template presented in this chapter. This template based design offer a contrasting look compared to the current view of the schedule presented in figure 2 (chapter 2.1.2 Schedule).

5.5 Development suggestions

There was only one student who preferred the current view of the schedule which can be interpreted that the students are not completely satisfied with the way the schedule is visualised. Although, we cannot conclude that this is the case for sure, because we do not know how many of the seventeen students' who actually wanted to be able to switch between the three different schedule views and how many who chose that alternative because they thought it would be the best way to visualise the schedule to please as many students as possible. This is why it cannot be determined that the possibility to switch schedule view would be the right thing to implement. However four students answered they preferred a calendar view rather than being able to switch views. This data together with the data from the focus group where the calendar view was the preferred alternative gives an indication that a calendar view should be considered to be implemented.

In general, the four major development suggestions brought up in the questionnaire, received positive feedback.

The suggestion of colour coding the schedule is something that, according to the results, should be implemented. Some good points were being brought up in the focus group about this subject, when one of the participants said that it could be problematic to use colour coding in the schedule in its current form but it should be easier to implement it in the schedule in an appealing way if it was in Calendar view. It could be problematic to colour code the schedule in an appealing way in the current schedule view and that it might be easier if the schedule would be in Calendar view. This cannot be concluded due to insufficient investigation of the subject in question. However it is clear that the students are positive to an implementation of colour coding in the future.

Data gathered in the focus group was used when formulating the development suggestion of visualising changes in the schedule with red colour. Due to the fact that students were missing changes because it was not clear that changes had been made, something had to be changed to prevent this from happening. The students were positive to this suggestion as well which shows that the students feel it would be helpful if changes in the schedule were visualised.

To improve the overview of courses the idea of a timeline was brought up. This suggestion was received positively in the focus group and in the questionnaire as well. This could be an effective way to visualise a course with dots of various sizes representing deadlines and important dates, since these two attributes were the two most important things to be visualised in the schedule, after name of classroom, according to the students. In the questionnaire a student mentioned that it could be good to visualise a dot which represents where in the course you are at the moment, to be able to see how close you are to the

upcoming deadlines. Since the students were positive to this we believe it could facilitate the students to get a clearer overview of the course and its moments.

The development suggestions which received least positive feedback was the suggestions that the schedule should be focused on the current lectures instead of having to scroll down to reach it. The students were still positive to the suggestion, but not as positive as they had been to the three suggestions before. This might have been because it is the development suggestion that would increase the efficiency of the schedule least even if the efficiency would be improved. The students might have thought of it as less important because of this. The students were positive enough for this suggestion to be implemented if the schedule view stays the same.

5.6 Methodology evaluation

Jakob Nielsen (1993) states that people normally know what kind of results the researchers are “hoping” to receive and therefore have a tendency to be too polite and positive in their replies. This has to be taken into account when measuring a single user interface. Even though we used the semantic differential scale to prevent non-homogeneous and too positive answers, we should have formulated the questions about the development suggestions differently. It was obvious what answers we were “hoping” to receive and the results may have been affected by acquiescence. In the questionnaire we formulated the following question: “Which of the following alternatives would you prefer as schedule view on KTH Social?”. The alternatives were three different views and the alternative “the possibility to switch between these three views” Seventeen out of twenty-two students chose this alternative. We cannot say whether they chose this alternative because they want to be able to switch or if they considered what would be the best solution for everyone. What we should have done was to eliminate that alternative in order to see which schedule view are the most popular among students. Perhaps removing the alternative would then prompt students to select the “other”-alternative where they could describe their own choice of schedule view.

Two of the usability attributes of Nielsen could not be measured in this study. These were *Learnability* and *Memorability*. The learnability of the schedule area could not be measured in this study since it was difficult to find KTH students who had not used the schedule area. 5 respondents of the questionnaire answered that they had never used the schedule area. However, due to the anonymity of the questionnaire, we were not able to reach these students, for further research regarding the learnability of the schedule area. Neither could the memorability be measured during this study, because we could not get in contact with students who had not been using the schedule area for a long time.

6. Conclusion

In this section sub questions will be answered to further determine if the problem definition can be answered.

Sub questions:

What kinds of issues occur in the schedule function today?

The issues occurring in the schedule function today is the kind of issues which decrease the efficiency of the schedule. These kinds of issues are not critical to rectify immediately.

What functions are needed to facilitate the students' study planning?

The timeline is meant to facilitate the students in their study planning and time management by improving the overview of the course and visualising important dates and deadlines in an appealing and pedagogic way.

What kind of course information needs to be visualised?

The most important course information to be visualised in the schedule according to the students were important deadlines and important dates.

How can the course information be visualised in a user friendly way?

It would not be possible to visualise important dates and deadlines in the schedule in an appealing way. Important dates and deadlines should instead be visualised in the course timeline where deadlines and dates are to be visualised with dots of various sizes.

Problem definition:

What are the development opportunities for the schedule function of KTH Social?

This study has determined that the schedule function of KTH Social can be developed further. The development opportunities determined are:

Efficiency decreasing issues were discovered and these should be rectified to improve the schedule in terms of efficiency.

Important changes in the schedule presented with red colour

Students had experienced issues with not noticing changes in the schedule because the changes were not presented in an obvious way. The students were positive to the idea of presenting the changes in red colour.

Course schedule focused on current lectures

In the current schedule view the schedule should be focused on the current lecture to increase efficiency.

View and colour coding of the schedule

Colour coding the lectures together with the schedule presented as a calendar view would contribute in making the schedule more appealing and may improve the overview of the schedule. The possibility to switch in between the different schedule views would be a positive improvement of the schedule.

A Timeline above the schedule

To improve the overview of courses a timeline would be aiding the students in achieving a better overview of deadlines and where they are in the course at the moment to improve their study planning and time management.

7. References

Web references:

A brief history of time management, 2010. Accessed via:

<<http://www.inc.com/ss/brief-history-time-management/>>. [April 1st 2013]

Enkel planering för alla branscher, Evolvera, 2013. Accessed via:

<<http://www.evolvera.se/se/branscher/>>. [April 15th 2013]

Grupp: Virtuellt campus, 2013. Accessed via:

<<http://www.kth.se/social/group/virtuellt-campus/>>. [April 18th 2013].

Kandidatexjobb i Medieteknik (DM129X) år 2011, 2013. Accessed via:

<<http://www.csc.kth.se/utbildning/kandidatexjobb/medieteknik/2011/>>. [April 23th 2013].

KTH Social för lärare, 2012. Accessed via:

<<https://www.kth.se/social/group/virtuellt-campus/page/kth-social-for-larare-2/>>. [March 27th 2013].

KTH Social för studenter, 2012. Accessed via:

<<https://www.kth.se/social/page/kth-social-for-studenter-2/>>. [April 15th 2013].

KTH Social hjälpforum, 2012. Accessed via:

<<https://www.kth.se/social/group/help/post/hur-lang-tid-tar-det-fran-det/>>. [April 24th 2013].

KTH Social schema, 2012. Accessed via:

<<https://www.kth.se/social/course/SF1625/calendar/>> [June 1st 2013]

KTH Social schema föreläsning, 2012. Accessed via:

<<https://www.kth.se/social/course/SF1625/event/5856780/>> [June 1st 2013]

KTH Social, statistic (2013). Accessed via:

<https://www.kth.se/social/statistics?start_date=2012-04-01+00%3A00%3A00&end_date=2013-04-30+23%3A59%3A59&filter_series=45> [May 3rd 2013]

Om schema, 2013. Accessed via:

<<http://www.kth.se/student/schema/om-schema-1.2214/>>. [April 22th 2013].

Uppföljning och effekter av KTH Social, 2011. Accessed via:
<<https://www.kth.se/social/group/virtuellt-campus/page/uppdrag-om-uppfoljning-och-eff/>>.
[April 15th 2013].

Virtuellt campus, 2011. Accessed via:
<<https://www.kth.se/social/group/virtuellt-campus/page/1-vad-ar-virtuellt-campus/>>. [April
17th 2013].

Books, journals and other print:

Bond, M. and Feather, N. (1988), "Some correlates of structure and purpose in the use of time", *Journal of Personality and Social Psychology*, Vol. 55, pp. 321-9.

Britton, B.K. and Tesser, A. (1991), "Effects of time-management practices on college grades", *Journal of Educational Psychology*, Vol. 83, pp. 405-10.

Claessens, B.J.C. et al., 2007. A review of the time management literature. *Personnel Review*, 36(2), pp.255–276.

Cohen, L., Manion, L. and Morrison, K., 2000. *Research Methods in Education* [5th edn]
London: Routledge Falmer.

Friborg, O., Martinussen, M. and Rosenvinge, J.H. (2005), "Likert-based vs. semantic differential-based scorings of positive psychological constructs: A psychometric comparison of two versions of a scale measuring resilience", *Personality and Individual Differences* 40 (2006) 873–884

Gulliksen J., Göransson B., (2002), *Användarcentrerad systemdesign*.

Hewett. et al., 1992. *ACM SIGCHI Curricula for Human-Computer Interaction*.

Kaufman, C.J., Lane, P.M. and Lindquist, J.D. (1991), "Time congruity in the organization: a proposed quality of life framework", *Journal of Business and Psychology*, Vol. 6, pp. 79-106.

Kaufman-Scarborough, C. and Lindquist, J.D. (1999), "Time management and polychronicity: comparisons, contrasts, and insights for the workplace", *Journal of Managerial Psychology*, Vol. 14, pp. 288-312.

Lakein, A., 1973. *How to Get Control of your Time and Life*, Nal Penguin Inc., New York, NY.

Lang, D., 1992. "Preventing short-term strain through time-management coping", *Work & Stress*, Vol. 6, pp. 169-76.

Macan, T.H., Shahani, C., Dipboye, R.L. and Philips, A.P., 1990. "College students time management: correlations with academic performance and stress", *Journal of Educational Psychology*, Vol. 82, pp. 760-8.

Macan, T.H., 1994. "Time management: test of a process model", *Journal of Applied Psychology*, Vol. 79, pp. 381-91.

Macan, T.H., 1996. "Time-management training: effects on time behaviours, attitudes, and job performance", *The Journal of Psychology*, Vol. 130, pp. 229-36.

Macan, T., Gibson, J.M. & Cunningham, J., 2010. Will you remember to read this article later when you have time? The relationship between prospective memory and time management. *Personality and Individual Differences*, 48(6), pp.725-730.

Nielsen, J. & Hackos, J.T., 1993. *Usability engineering*, Academic press Boston.

Sabelis, I., 2001. "Time management: paradoxes and patterns", *Time & Society*, Vol. 10, pp. 387-400.

Saffer D., 2010. *Designing for interaction*. 2nd ed. Berkeley: New Riders.

Strongman, K.T. and Burt, C.D.B., 2000. "Taking breaks from work: an exploratory inquiry", *Journal of Psychology*, Vol. 134, pp. 229-42.

Trueman, M. and Hartley, J., 1995. "Measuring Time-Management Skills: Cross-Cultural Observations on Britton and Tesser's Time Management Scale", *Higher Education*, ED417667.

Trueman, M. and Hartley, J., 1996. "A comparison between the time management skills and academic performance of mature and traditional-entry university students", *Higher Education*, Vol. 32, pp. 199-215.

Vodanovich, S.J. and Seib, H.M., 1997. "Relationship between time structure and procrastination", *Psychological Reports*, Vol. 80, pp. 211-5.

Appendix – Questionnaire

Utvecklingsstudie av schemadelen på KTH Social

Vi är två KTH-studenter som skriver ett kandidatexamensarbete om schemafunktionen på KTH Social, hur den används idag och vilka utvecklingsmöjligheter som finns. Vi skulle uppskatta stort om du har möjlighet att svara på några frågor som behandlar detta.

Formuläret består av tre delar; del ett är lite längre och innehåller frågor om KTH Social, del två handlar om utvecklingsförslag och den sista delen ställer frågor om dina nuvarande studierelaterade planeringsvanor. Beräknad tid för formuläret är 5-7 minuter och dina svar är givetvis helt anonyma.

Tack på förhand!

* Required

KTH Social

1. Känner du till att det finns en utvecklingsgrupp vid namn Virtuellt Campus där man kan ge feedback och ställa frågor om KTH Social? *

- ☐ Ja
☐ Nej

Om ja, har du utnyttjat gruppen för ovanstående ändamål?

- ☐ Ja
☐ Nej

2. Har du någon gång använt schemat på KTH Social? *

- ☐ Ja
☐ Nej

3. Vet du att det finns en informationssida till schemadelen på KTH Social, som bl.a. beskriver hur man söker kursscheman på KTH Social? *

- ☐ Ja
☐ Nej

4. Vet du att man kan synkronisera schemat på KTH Social med tjänster såsom exempelvis Google Calendar, Outlook eller Webmail? *

Fråga 5 innehåller följdfrågor till denna fråga. Om ditt svar på denna fråga (4) är "Nej", fortsätt till fråga 6.

- ☐ Ja
☐ Nej

5. Använder du dig av den funktionen?

- ☐ Ja
☐ Nej

Om ja, tillsammans med vilken tjänst?

Hur tycker du att schemat fungerar tillsammans med tjänsten?

1 2 3 4 5 6 7 8

Mycket dåligt ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Mycket bra

6. Har du stött på något problem vid användning av schemat på KTH Social?

☐ Ja

☐ Nej

Om ja, motivera:

7. Svara på följande frågor genom att välja på en skala från 1-8
Det går snabbt och effektivt att hitta det jag söker efter i schemadelen

1 2 3 4 5 6 7 8

Stämmer inte alls ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Stämmer mycket väl

Jag upplever att KTH Socials schemadel är:

1 2 3 4 5 6 7 8

Svår att förstå ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Lätt att förstå

Jag upplever att KTH Socials schemadel är:

1 2 3 4 5 6 7 8

Svårnavigerad ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Lättnavigerad

Totalt sett är min upplevelse av att använda schemat på KTH Social

1 2 3 4 5 6 7 8

Negativ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Positiv

8. Hur viktigt är det att följande information syns i schemat på KTH Social? *

Tänk på att frågan behandlar hur viktig informationen är i just schemadelen av KTH Social och inga andra delar. Detta är information man skulle kunna komma åt genom att klicka sig in på ett specifikt studietillfälle i schemat och läsa dess beskrivning. Denna beskrivning är den samma som exporteras till andra plattformar såsom Google Calendar.

	Helt oviktig	Inte särskilt viktig	Mer oviktig än viktig	Mer viktig än oviktig	Väldigt viktig	Extremt viktig
Lokalnamn.	☐	☐	☐	☐	☐	☐
Lokalplats med vägvisning (länk till karta/video).	☐	☐	☐	☐	☐	☐
Kortare text med beskrivning om vad föreläsning/övning kommer att handla om.	☐	☐	☐	☐	☐	☐
Viktiga datum i kursen.	☐	☐	☐	☐	☐	☐
Länk till föreläsningsslides, artiklar, kapitel i kursbok).	☐	☐	☐	☐	☐	☐
Rekommenderade tal/sidor att räkna/läsa inför föreläsning eller övning.	☐	☐	☐	☐	☐	☐
Information om vilka mattetal som kommer att gås igenom på en föreläsning eller övning.	☐	☐	☐	☐	☐	☐
Namn på föreläsare/övningsledare.	☐	☐	☐	☐	☐	☐
Viktiga deadlines (läggs in som separata poster i schemat, utöver studietillfällen).	☐	☐	☐	☐	☐	☐
Information om delmål (T.ex: "Rekommenderat delmål: Ni har hunnit läsa till sida X vid detta tillfälle")	☐	☐	☐	☐	☐	☐
Rekommendation av studieböda inför kursmoment (Rekommenderat antal timmar att studera inför till exempel en KS)	☐	☐	☐	☐	☐	☐
Information huruvida akademisk kvart gäller eller inte.	☐	☐	☐	☐	☐	☐

Continue »

Utvecklingsstudie av schemadelen på KTH Social

* Required

Utvecklingsförslag för visualiseringen av scheman:

9. Vilket av följande alternativ skulle du föredra som vy över Schemat på KTH Social? *

- ☐ Standard (blogg-vy med beskrivande text)
- ☐ Kompakt (kortfattad info om studietillfällen för ökad överskådlighet)
- ☐ Kalendervy (vecko/månadsvis med stor överblickbarhet)
- ☐ Möjligheten att växla mellan dessa tre olika vyer
- ☐ Annan

Om annan, motivera:

10. Hur ställer du dig till följande: *

Färgkodning av kurstillfällen beroende på kursnamn/kurstyp

1 2 3 4 5 6 7

Negativ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Positiv

*

Rödmarkerade kurstillfällen då en ändring av viktiga parametrar skett (exempelvis tid, datum, plats)

1 2 3 4 5 6 7

Negativ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Positiv

*

En timeline ovanför schemadelen som visar hela kursen som en linje med punkter på. Punkterna motsvarar deadlines och viktiga datum där större punkter är lika med viktigare händelser. Punkterna är klickbara och för dig ned till respektive studietillfälle.

1 2 3 4 5 6 7

Negativ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Positiv

*

Kursschema fokuserat på aktuellt studietillfälle. Aktuellt studietillfälle visas först/överst och kommande tillfällen ligger nedanför i kronologisk ordning (aldre, inaktuella, studietillfällen visas genom en knapp ovanför aktuellt tillfälle)

1 2 3 4 5 6 7

Negativ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Positiv

11. Har du förslag på ändringar som kan förbättra användandet och visualiseringen av schemat på KTH Social eller en kommentar till något av förslagen här ovan?

« Back

Continue »

Utvecklingsstudie av schemadelen på KTH Social

* Required

Studieplanering

12. Hur väljer du att planera dina studier? *

Bocka av de alternativ som stämmer för dig

- ☐ Jag förbereder en daglig "att-göra"-lista (checklista).
- ☐ Jag förbereder en veckovis "att-göra"-lista.
- ☐ Jag förbereder en "att-göra"-lista inför ett längre tidsspann (ex. periodvis).
- ☐ Jag sätter upp egna kortsiktiga delmål eller mindre deadlines för att planera studierna.
- ☐ Jag använder mig av en planeringsapplikation (Exempelvis: Week calendar, Evernote, "Påminnelser").
- ☐ Jag använder mig av en "Getting-Things-Done"-applikation (Exempelvis: Lift, Pomodoro, Wunderlist).
- ☐ Jag använder mig av en planeringsmetod/verktyg som inte går under samma kategori som de ovanstående nämnda (exempelvis analog kalender, papper och penna).

13. Beskriv vilka verktyg/metoder du använder och hur de hjälper dig att studieplanera *

14. Sant eller falskt: Hur väl stämmer följande påståenden in på dig? *

Skala 1-8, 1-2 (det här uttalandet stämmer inte alls överens med mig), 3-4 (Mer falskt än sant), 5-6 (Mer sant än falskt), 7-8 (Det här uttalandet beskriver mig mycket väl)

	1	2	3	4	5	6	7	8
Jag pluggar mest dagarna precis innan tentamen/inlämning.	☐	☐	☐	☐	☐	☐	☐	☐
Jag slutför inlämningsuppgifter i god tid.	☐	☐	☐	☐	☐	☐	☐	☐
Jag möter alltid deadlines.	☐	☐	☐	☐	☐	☐	☐	☐
Jag använder min tid väl till studier.	☐	☐	☐	☐	☐	☐	☐	☐
Jag prioriterar svåra kurser över lätta.	☐	☐	☐	☐	☐	☐	☐	☐

Jag prokrastinerar så mycket att det går ut över mitt studieresultat.	☐	☐	☐	☐	☐	☐	☐	☐
Jag håller alltid reda på vilka inlämningsdatum och deadlines som gäller.	☐	☐	☐	☐	☐	☐	☐	☐
Jag vet alltid var jag hittar gällande kurslitteratur.	☐	☐	☐	☐	☐	☐	☐	☐
Jag vet alltid vilka lokaler som gäller för studietillfällen.	☐	☐	☐	☐	☐	☐	☐	☐
Jag vet alltid vägen till studielokaler.	☐	☐	☐	☐	☐	☐	☐	☐
Jag är säker på när akademisk kvart gäller eller inte.	☐	☐	☐	☐	☐	☐	☐	☐
Jag är säker på hur mycket tid jag bör lägga på studier.	☐	☐	☐	☐	☐	☐	☐	☐
Jag är medveten om när det är rekommenderat att börja plugga inför en tentamen/inlämning.	☐	☐	☐	☐	☐	☐	☐	☐
Jag läser/räknar rekommenderade sidor/tal inför föreläsningar och övningar.	☐	☐	☐	☐	☐	☐	☐	☐

15. Har du något att tillägga som inte har getts tillfälle att nämna under denna enkät?
Vi uppskattar alla tips och all feedback!

Never submit passwords through Google Forms.

