How to Develop a Help System for a Communication App

by

Johan Linder

LIU-IDA/LITH-EX-G--15/041--SE

2015-08-02
How to Develop a Help System for a Communication App

by

Johan Linder

LIU-IDA/LITH-EX-G--15/041--SE

2015-08-02

Handledare: Johan Åberg
Examinator: Mattias Arvola
**Sammanfattning**


**Abstract**

This study aimed to develop a help system for a communication app, identify usability issues regarding that help system and develop redesigns to improve it. The focus was to maximize perceived usefulness and minimize perceived annoyance of the help system. During the study two design proposals were developed and two user tests, which used low-fidelity prototypes, were performed to evaluate the design proposals. The first design proposal was evaluated in the first user test, thereafter an iteration of that design was developed based on the usability issues found in the user test. This iteration of the design was the second design proposal which were evaluated in the second user tests. Both design proposals and data from both user tests were analysed together which resulted in seven recommendation that aimed to maximize perceived usefulness and minimize perceived annoyance when developing a help system for a communication app. Due to a lack of generalizability these recommendations should however be used with caution since they are mainly applicable to the system evaluated in this study. They can however be used as an inspiration and a starting point for someone designing a help system for an other communication app.

**Keywords**

Table of Contents

1 Introduction 2
   1.1 Goals with The Study 2
   1.2 Problem Statements 3
2. Theory 4
   2.1 User Experience 4
   2.2 How can the UX be Evaluated? 6
   2.3 Design Methods 8
   2.4 Help Systems 10
   2.5 Walkthrough of Three Applications and their Help Systems 14
3. Method 24
   3.1 Designprocess for Design Proposal 1 24
   3.2 The First User Test 26
   3.3 Designprocess for Design Proposal 2 29
   3.4 The Second User Test - UT2 31
   3.5 Analysis Methods 32
4 Results 33
   4.1 Design Proposal 1 33
   4.2 Identified Issues from UT1 36
   4.3 Design Proposal 2 38
   4.4 Identified Issues from UT2 40
5. Analysis 42
   5.1 How can a Help System for a Communication App be Designed to Maximize Perceived Usefulness of the Help System 42
   5.2 How can a Help System for a Communication App be Designed to Minimize Perceived Annoyance of the Help System 45
6. Discussion 48
   6.1 Method 48
   6.2 Result 51
   6.3 The Future 52
7. Conclusion 53

References

Appendix 1 - Sketchbook
Appendix 2 - Tasks & Forms
Appendix 3 - Semi-structured Interview
Appendix 4 - Observation and Think aloud regarding Briteback.
Appendix 5 - Data from UT1
Appendix 6 - Data from UT2
1 Introduktion

When developing technology and applications used by humans it is very important to consider its usability. Studies have found that 40% of the users time with computers are lost due to a "frustrating experience", the most salient reasons being features in the interface that are hard to find, lacking or unusable (Matejka, Grossman & Fitzmaurice, 2011). The technology must allow the user to execute the task at hand and to do so without causing unnecessary frustrations and efforts for the user. The purpose of usability evaluation is to evaluate how well this has been achieved and to help developers and designers to create a solution which is intuitive and easy to use. This is done by taking the user experience into account and to apply methods for collecting and analyzing evidence for the usability of the technology.

It is well-accepted that one important component of usability is learnability, some even believe it to be the most important (Grossman, Fitzmaurice & Attar, 2009). This is because all interfaces requires some sort of learning before usage. And this can greatly effect how the product’s usability is perceived by the user. If the first experience with something is perceived as frustrating, confusing or in any other way generates an unsatisfying experience there are little chance the user will continue to use it. Therefore it’s important to evaluate the learnability of a new product and to make sure that the right design decisions are made to enhance the learnability and through that ensure that first time users continues to use the product. One effective way to enhance a products learnability is to implement a help system that guide and teaches the user important parts of an application (Shamsuddin, Syed-Mohamad, Sulaiman 2014).

The purpose of this thesis is to develop, evaluate and improve a help system for the communication app Briteback. Briteback is a start-up company in Norrköping and are developing a applications that aims to simplify users online communication. Today it’s not unusual that one person can have several channels for communication. For example this could be two different email accounts, one or more chat applications and then text messaging on top of that. This adds up to several different applications for the user to keep track on and results in frustration and wasted time. Briteback aims to supply a solution which gathers all these different communication channels in one singel application, to simplify online communication. Their main target group are businesses that’s looking to simplify both the internal and external communication. With their application the user will be able to get all the different massages in one place, answer them from one place and share them with colleges and friends. Since Briteback combine different ways of communicating and thus presents a lot of information to the user it’s important to develop, evaluate and improve a help system that can present all the different features in the application and get the user to efficiently utilize the application.

To evaluate a help system within Briteback user tests with low-fidelity prototypes was performed. The main focus was towards if the user used the help system to solve the tasks given. The study was formative meaning it aimed towards exposing issues with a design, in this case the help system. During the study two separate user tests was performed, in between these a redesign of the help system based on the results from the first user test was made.

1.1 Goals with the Study

The goal of this study was to develop a help system for a communication app, identify usability issues regarding that help-system and develop redesigns to improve it.
1.2 Problem Statements
This study aimed to answer these question regarding the use of a help system within the communication app Briteback.

How can a help system for a communication app be designed to:
• maximize perceived usefulness of the help system
• minimize perceived annoyance of the help system
2. Theory
In this chapter theories regarding usability and how it can be measured will be described. Thereafter theories about design methods and different kinds of help systems will be presented and lastly walkthroughs of three modern communication apps will be shown.

2.1 User Experience
User experience (UX) have a large variety of definitions dependent on who's defining it (Tullis & Albert, 2013). Tullis and Albert (2013) defines UX by ascribing it three characteristics:

A user is involved.
That user is interacting with a product, system, or really anything with an interface.
The users' experience is of interest and it's observable or measurable.

They believe that this wide definition of UX is a strength because the methods used to evaluate it can then be used on a large variety of products. Furthermore it doesn't limit UX to to a specific technology, the key element remains how a user experiences' a product. This is a good thing since the definition of UX can then survive a fast technological progress in which products goes through many changes and becomes more and more complex. (Tullis & Albert, 2013)

The increase in technological progress and products aimed towards consumers makes it even more important that these products easily can be used and understood by their users. One might think that when technology is evolving it automatically becomes easier to use and understand, however, without UX this is not the case. When products becomes more technologically advanced it's important to pay close attention towards how the actual user experiences it and make sure that they feel it is efficient, easy to use and engaging. A bad UX can result in frustration, economic losses, physical damage and even loss of lives. Tullis and Albert highlights an example where people did not understand how to use an automatic external defibrillator, which is used to resuscitate a person experiencing cardiac arrest, due to bad design in regards to the UX. (Tullis & Albert, 2013)

2.1.1 Learnability
Learnability is one of the most fundamental parts of UX and it plays an important role for initial adoption and the success of a product (Rafique, Jingnong, Yunhong, Abbasi, Lew & Wang 2012; Grossman, Fitzmaurice & Attar 2009; Hohmann, 2006). The reason for this is that if the first experience with something is good it makes it more likely that the user will continue using it (Matejka, Grossman & Fitzmaurice, 2011). Despite the consensus that learnability is an important factor in UX, historically it's an area within human-computer interaction where there is little agreement regarding how it should be defined (Grossman, Fitzmaurice & Attar 2009). This has lead to many UX professionals having their own definitions of learnability (Grossman, Fitzmaurice & Attar 2009). Grossman, Fitzmaurice and Attar (2009) have however provided a extensive survey of learnability research from which they developed a taxonomy with different definitions of the term learnability from which researchers can choose one that benefits their particular study. For this study their definition ”Learnability is based on the ability to perform well during an initial task” provides a clear and relevant description.

Tullis and Albert (2013) believes learnability is one of the most important aspects of a modern application, this is because there are many more ”self-service” applications than before. Applications which are used quickly and without any extensive training. The user expects to be able to open the application, use it with high efficiency and without frustration and then go and do something else. Rafique et al. (2012) also argues for this, in a world that quickly becomes more technologically advanced software is developing fast and becomes more and more complex.
They believe that good learnability is especially important for web applications since users can quickly switch between these applications and expects to do this with minimal effort. Rafique et al. (2012) believe that good learnability will lead to higher satisfaction for users due to quicker learning times and an adequate productivity.

Shamsuddin, Syed-Mohamad & Sulaiman (2014) argues that learnability is closely related to understandability since a software is easier to learn if the user understands it. Understandability can be defined as "the ability of a user to understand the capabilities of the software and if it's suited to accomplish specific goals" (ISO/IEC 9126). (Shamsuddin, Syed-Mohamad & Sulaiman 2014) have done a systematic literature review through which they present the most commonly identified issues that users face in software applications that are caused by low learnability and understandability. These issues are:

- Navigating through the software applications. Users don't know how to navigate and get to the information they seek.
- Finding the function. Users don’t find the functions they are looking for which causes unnecessary navigational steps.
- Understanding the information. Users get confused by the language used or by the amount of information presented on each page.
- Understanding the functions. Users might not understand the functions even if they have found them.

Shamsuddin, Syed-Mohamad & Sulaiman (2014) describe solutions to these problems which has been presented in the literature they have reviewed. One effective way to improve the learnability is to modify the graphical user interface (GUI), for instance by reducing the amount of functions and features presented to the user. This has been proven effective for web applications but has a few drawbacks. For example users don't learn more advanced functions and features if it's not necessary even though it could have been useful for them to know. Another useful and common technique to enhance learnability is by implementing a help system. A help system is some sort of guideline which helps the user by providing support when needed. This could either be done the first time the user encounters the application, later on when discovering a new feature or at any other time during the usage of the application. The goal with a help system is to teach the user how to handle different functions and what to use them for. It can also be used to solve problems that the user can encounter. (Shamsuddin, Syed-Mohamad & Sulaiman 2014) A more detailed description of help systems are presented in 2.8 Help systems.

To understand the learnability concept Grossman, Fitzmaurice and Attar (2009) have, through their literature review, identified smaller parts of the notion learnability. They present three main categories; Initial learnability, Extended learnability and Learning as an function of experience.

Initial learnability focuses on how well the user performs during their initial experience with the product, how easy the product is to understand and to start using. Initial learnability exists in all products, both feature-rich and those more petite with a smaller amount of functions. Examples of these are communication apps and web applications (Grossman, Fitzmaurice & Attar 2009).

Extended learnability focuses on how the users knowledge of the application develops over time and if the user continues to learn new functions after the period of initial learnability is over. Extended learnability is an important part of feature-rich application like Photoshop or CAD were the user can keep evolving long after becoming functioning in the application (Grossman,
Learning as an function of experience refers to users that haven’t used a specific application before, however they have used a similar application which gives them knowledge about which functions that could exists, how to use them and how the domain in general works. This will make the learnability different compared to other users but learning will still occur and should still be considered if it’s relevant. (Grossman, Fitzmaurice & Attar 2009)

2.2 How can the UX be Evaluated?
When measuring UX different kinds of UX metrics are used. These metrics are based on a reliable measurement system which aims to make sure that the metrics are comparable and consistent in the same manner one minute is as long as an other minute or 1kg is always 1000g. This is a very important quality since it makes results comparable and meaningful. Independent of which UX metric one uses it has to be observable, meaning that one has to be able to notice, for example, if a task was carried out as it should, how much time it took or what someone felt when doing it. These metrics then is turned into numbers resulting in claims as; 45% of the participants did not complete the task in the set time limit; or 13% of the participants felt the application was difficult to use. What differentiate UX metrics from other metrics is that they tell us something about the users personal experiences, thoughts and behavior when using the product. (Tullis & Albert, 2013)

2.2.1 The Value of UX Metrics
Tullis and Albert (2008) argues that using UX metrics offers a lot more information than one would get from simply observing users without keeping track on specific tasks. Metrics add structure when designing and evaluating a product. Structure which can lead to insights and can reveal important information that can make sure design decisions concerning the product isn’t made by “gut-feeling” but instead is based on actual knowledge. UX metrics will show if a product is improving from one design iteration to another, it will show if the desired results were achieved and by how much and it can also play a major role in finding out how changes in the design actually effected, for example, the amount of errors being made by the users. Overall UX metrics help designers and developers to better understand users behavior connected to the product they are working with. Tullis and Albert (2008) argues UX metrics gain their true power when combined with an iterative design process where the lessons from the user tests are put into a new iteration of the design which then is tested again. By doing so from the early stages of development you can enhance the likelihood that the end product will be to the users liking. And therefor you enhance the possibility of a successful product that will yield a positive UX. (Tullis & Albert, 2013)

2.2.2 How to Decide which Metrics to Use
To decide which UX metrics to use one first have to consider whether a formative or a summative approach best fits the purpose of the user test. A formative approach aims towards evaluating a product while it’s being developed. Formative studies is always carried out before the product is finalized and its results helps to shape the product. A summative approach is used when a finalized product is to be evaluated regarding if it meets the objectives set beforehand. (Tullis & Albert, 2013)

To get an overall understanding of the UX one have to consider the users’ goals, why would people use this product and why? Dependent on what their goals are, the researcher chooses
different metrics that fits that goal. Two very important aspects of the UX to measure is *performance metrics* and *satisfaction metrics*. It’s important to use both of these kinds of metrics to get an accurate and complete understanding of the UX. (Tullis & Albert, 2013)

*Performance metrics* concerns how the user interacts with the product and if this is done successfully. When using performance metrics you measure how long time it takes for the user to accomplish a task, the amount of effort it takes, how many errors that are made or how long it takes for the user to become proficient when performing the tasks. All performance metrics are observed and collected by the test moderator or by automated tools. (Tullis & Albert, 2013)

*Satisfaction metrics* is a kind of Self-reported metric and concerns what the user says or thinks about the experience with the product. Here you are looking for the user’s feelings in regard to if the product was easy to use, if it was confusing or if it exceeded the users expectations. All self-reported metrics are reported by the test-user in some way and then recorded by the test-moderator. (Tullis & Albert, 2013)

Another useful classification of UX metrics is *Effectiveness, Efficiency* and *Satisfaction*. Effectiveness addresses if the user can perform the task at hand, efficiency addresses the amount of cognitive or physical effort put into completing the task. Satisfaction addresses how the user felt while performing the task. Both effectiveness and efficiency is measured using performance metrics while satisfaction is measured using satisfaction metrics. (Tullis & Albert, 2013)

### 2.2.3 Different Kinds of Performance Metrics

There are a lot of different performance metrics that can be used, here the ones essential to this study is presented in detail.

*Task success* is a very diverse metric since it can be used on a wide variety of products. Task success measures the effectiveness of the product. As long as there is a well-defined task with a clear end-goal, task success can be measured. It’s quite simple, the test-user gets a task which they perform and if they manage to do it then that is a sign of a functioning design. If they fail to perform the task something is wrong and needs to be adjusted. One important part of task-success is that the end-goal for the user is distinct and clear. An example of a task could be; buy an air-plane ticket to London. If the user fails to perform this task in a precise manner that could result in a faulty ticket. This would then have sever consequences for the user and therefor binary success would be suiting to use in this case. (Tullis & Albert, 2013)

There are a few other things to consider when measuring Task-success, the criteria for success have to be defined in advanced. This is important because if its not defined in advanced the data can become unclean and the metric might not be useful at all. Furthermore you should decide if *binary success* or *levels of success* are to be used. (Tullis & Albert, 2013)

*Binary success* means that the task was performed correctly or it wasn’t, there’s no middle ground. It’s a common way of measuring since its simple and useful. It’s especially useful if the success of the product itself depends on specific tasks being carried out the correct way. An example of a task could be; buy an air-plane ticket to London. If the user fails to perform this task in a precise manner that could result in a faulty ticket. This would then have sever consequences for the user and therefor binary success would be suiting to use in this case. (Tullis & Albert, 2013)

*Levels of success* on the other hand allows for some error. meaning that even if the user didn’t per-
form the task correctly in a binary sense he or she might have gotten really close or gotten some parts right. This is relevant when there are some grey area associated with task success, the user might still gain from it even if it’s not performed correctly. An example of a task could be; choose a computer with 4GB of RAM that weighs less than 3kg. If the user chooses a computer with 4GB of RAM but it weighs 3.2kg it would not have any severe consequences for the user. With a binary approach this would however be considered a failure. When measuring levels of success you often divide it into levels of completion. (Tullis & Albert, 2013)

For example:
- Complete success: With assistance; or without assistance.
- Partial success: With assistance; or without assistance.
- Failure: User thought it was complete, but it wasn’t; or user gave up.

Time on task is a metric that measures how long it takes for a user to perform a specific task. This gives you information about the efficiency of the product. It’s an important aspect for products that are used frequently and since the user would gain drastically from a more efficient product. It would save time for the user and therefore make it likelier for the user to continue to use the product. Time on task is measured simply by timing when the user starts performing the task and to stop timing when the user finishes the task. An important thing to do beforehand when using time on task is to decide exactly when a task starts and when it stops. (Tullis & Albert, 2013)

There are some things to consider when using time data. First of all you have to determine if only the times from successfully performed tasks should be counted or if the times from unsuccessful task also should be apart of the data. If time from unsuccessful tasks is included there might be one test-user that took a very long time completing one task, this will then make the time results highly inconsistent. However this would more accurately reflect the overall user experience which might be of interest. However if only the successful tasks are included the measure of efficiency will be cleaner. Tullis and Albert recommends that if the moderator is the one determining that the task was a failure you should not include the time. If the test-user stopped trying on their own you should include the time. (Tullis & Albert, 2013)

The second thing to consider when using time data is if a Think-aloud protocol should be used. This is when the test-user is told to tell the moderator what he or she is feeling and thinking while performing the tasks. A Think-aloud protocol can produce valuable data regarding the user experience during the test but it greatly effects the time it takes to accomplish a task. Tullis and Albert therefore recommend, if you wish to use a think-aloud protocol and also capture time, you should ask the test-user to "hold" any comments or thoughts till in-between tasks. (Tullis & Albert, 2013)

2.2.4 Different Kinds of Self-Reported Metrics
Tullis and Albert (2008) believes self-reported metrics may contain the most important information about the user. This can tell if the test-user liked the experience of interacting with the product or not. Which is one of the main reason people come back to use a product again (Tullis & Albert, 2013). The self-reported metrics presented here are the ones most relevant to the study.

The likert scale is one of the most commonly used means to capture self-reported data and it’s well documented. With the Likert scale users rate how well they agree with a given statement, the statement may be positive (It was easy to complete this task) or negative (It was difficult to
A Likert scale is most often used with a five point scale and each number is paired with a descriptive term. The terms most usually used are:

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

It's possible to use a 7 point likert scale, however if higher numbers is used it gets difficult constructing relevant descriptive terms for each number. (Tullis & Albert, 2013)

Post-session Ratings is a common way of getting information regarding the overall perceived usability after interacting with the product. They can especially be useful when doing multiple tests over time to see how the overall experience have developed. It is also useful when examining different designs to see which provides the best overall UX. (Tullis & Albert, 2013)

One very commonly used Post-session rating is the System usability Scale (SUS). SUS is easy to administer, has good reliability and validity measures and has been proven to provide a good understanding for a products UX. It’s constructed by 10 statements, half of which is phrased positive and the other half negative, the test-user gets to rate the statements using a five-point likert scale. The score from the ten statements can then be combined into a score on the scale of 0-100 where 100 is considered a perfect score. A SUS score below 50 means the product isn’t acceptable, a score between 50-70 is marginal and a score over 70 is acceptable. (Kortum & Bangor, 2013; Tullis & Albert, 2013)

2.2.5 Semi-Structured Interview
A semi-structured interview most commonly refers to a situation in which the interviewer ask questions based on an interview guide. This interview guide is a short list of questions or areas that the interviewer wishes to attend to during the interview. There is no consensus towards how the interview guide should be formulated and structured, it is however important that the questions allows the researcher to gain insights towards how the interviewee experiences a situation and that the interview guide contains room for the person to answer freely. Even though the questions are meant to be asked in the planned order it is common to rearrange the questions during the interview to fit the specific occasion. It is also common to ask follow up questions to answers that seems to be of extra interest for the researcher even if they are not part of the interview guide. Questions in this type of interview is often formulated in general terms to allow the interviewee to formulate the answer the way he or she wants to. A semi-structured interview is often used when the interviewer wants to gain insights about the interviewees’ experience of different occurrences and their behavior towards that. (Bryman, 2008)

2.3 Design Methods
Here I will present methods that are used in the design process.

2.3.1 Sketchbook
A sketchbook is a physical book that the designer uses to keep track of ideas, thoughts and insights during a design process. It’s a visual documentation that’s recorded in sequential order and can contain, text, drawings, clip-outs or anything else that the designer consider relevant. It plays
a central role during the design process since it creates a overview of the ideas that has come to during the project. It includes both different iteration of the same idea as well as completely new ones. This gives the designer the possibility to look back, reflect or even use old ideas that might not have been considered good enough before but with time research may have revealed new information which makes the idea relevant again. A sketchbook isn’t about quality, it’s about quantity. The more ideas and thoughts that’s kept track of in the sketchbook, the better the sketchbook is. The sketches doesn’t need to be well crafted, as long as the designer can understand them. The reason for it not needing to be of high quality is that the main use of a sketchbook is to get ideas out of ones head and make room for new ones. A very useful method to combine with a sketchbook is Design Rationale. (Arvola, 2014; Greenberg, Carpendale, Marquardt & Buxton, 2012)

2.3.2 Design Rationale

*Design rationale* is a way to ensure high quality of the design process. By using it the designer keeps track on the choices that have been made and why they have been made. This makes it easy to look back and examine what have been effecting, contributing or limiting during the design process. Through the Design Rationale one can get a clear understanding of why a design looks the way it does. (Arvola, 2014)

The designer uses Design rationale to compare ideas and determine their quality based on requirements set by the users, the projects time, it’s budget, economical barriers or if the idea is technically viable. The different requirements vary from project to project and which ones that are most relevant is often specified at the early stages of a project. The designer is looking for ideas that best fits the requirements of the project. (Arvola, 2014)

To create a clear visualization over how well the ideas fulfills the requirements the designer uses five characters:
- A plus sign is used to highlight positive aspects of the idea
- A minus sign is used to illustrate negative aspects of the design.
- The hash sign is used to number the design ideas and iterations.
- The exclamation mark is used when the designer chooses to utilize one of the ideas in either another iteration or in the final design.
- The question mark is used to highlight problems or potential problems with the idea that has to be examined.

It is recommended to use Design Rationale and a sketchbook in a combination since the two together creates a clear visualization over the entire design process, the choices and the methods that have been used. (Arvola, 2014)

2.3.3 Prototypes

*Prototypes* are an important part of the design process. It’s were all the different design elements are combined to form a holistic product which can be tested and evaluated. The reason for testing a design with prototypes is to experiment, understand the need of the users and evaluate what design decisions that works. Prototyping is a well established method to evaluate designs and it provides the designer with a way to early in the design process gain an understanding on how different designs is perceived by the users. Prototypes are especially effective as a part of a iterative design process and can be made as both High-fidelity and Low-fidelity prototypes. Which kind of prototype to use depends on the projects budget, available time and at what stage in the design process one is. (Rudd, Stern & Isensee, 1996)
**Low-fidelity prototypes** is a cost-effective way to quickly construct simple visualizations of a product. They are meant to give a general understanding of the look and feel of the product and to give a clear picture of the concept behind it. They are often made out of cardboard and paper and can consist of hand drawn or computer generated static screens. These prototypes should be used early in the design process. Testing with Low-fidelity prototypes is often carried out in a controlled way with a facilitator physically changing the screens and trying to imitate how the products is supposed to work. This means that the test-user is dependent on the facilitator when interacting with a Low-fidelity prototype. Low-fidelity prototypes should be used when trying to understand market- or user- requirements. It's an effective way to quickly evaluate different designs with the help of test-users and thereafter do an iteration of the design based on what you have learn from how the users experienced the prototype. One key aspects of Low-fidelity prototypes is that they are ideal to use before changes in the design may come with high costs due to extensive rebuilding of the product. Different things to depict and develop with the use of low-fidelity prototypes is new functions, early designs of navigation and screen layout. (Tohidi, Buxton, Baecker & Sellen, 2006; Rudd, Stern & Isensee, 1996)

### 2.4 Help Systems

A help system is a feature in an application which aims to instruct or teach the user how different parts and functions of the application works. The focus usually is on elements that the user might experience problems with or parts that are essential to the product. Help systems have proven to eliminate most learnability issues that exists in a application, especially in web applications. However they have one big drawback, when utilizing a help system the user have to stop what they’re doing and focus on the help system instead of focusing on what they’re actually trying to accomplish. There’s no learning in real time which can make the experience with a help system frustrating. (Shamsuddin, Syed-Mohamad & Sulaiman, 2014)

#### 2.4.1 Tutorials

A tutorial is a kind help system which enables users to gain insights on how a application works, it can contain text, video, sound and be interactive (Shamsuddin, Syed-Mohamad & Sulaiman, 2014). Wang, Chu, Chen, Hsu & Chen (2014) believes that by interacting with elements on the page the users gain deeper understanding of the application. Their research has shown that interactive tutorials generate the best results in completion times and preference. In their study 83% of the participants preferred an interactive tutorial rather than a static or video tutorial.

The following examples of tutorials is presented by Neil (2012) and focuses on mobile applications. They can however easily be modified to fit a desktop version of an application. Therefor I have chosen to include them to be able to show a larger variety of tutorials.

**Tour**

Figure 2 shows an example of a Tour. Neil (2012) believes that a tour is the best way to instruct a new user to the functions in a application. It should be offered the first time a user opens the application and later it should be accessible somewhere in the application so the user can go through it again if she wishes. A tour should highlight the most important functions of a application and preferably the ones most relevant to the user-goals. Furthermore a tour should consist of no more than six pages. (Neil 2012)
Tip
Figure 3 shows an example of a Tip. Including a tip can be done anywhere in the application, on the home screen or when users visit a page first time. Tips are good because they can be made contextually relevant to the user goals in a clear way. It’s important to place the tip close to what is being highlighted, keep the instruction or information short and to remove the Tip when the user starts interacting with the interface. (Neil 2012)

Transparency
Figure 4 shows an example of Transparency. Transparency consists of an extra layer on top of the ordinary screen containing instructions explaining how to navigate in the application. It’s an effective way to quickly and visually show the user important features and functions in the application. Once the user starts interacting with the content the transparent layer should disappear. (Neil 2012)
First Time Through

Figure 5 shows an example of a First Time Through. This kind of tutorial is built into an element the screen design and stays there until the user with that element for the first time. It could be a text saying “Click here to add a photo”, once the user does this that text will disappear since the user will have used the feature and are expected to know how it works. It’s important to clearly distinguish the First Time Through element from the regular content. (Neil 2012)

Persistent

Figure 3 shows an example of a Persistent. Persistent is similar to First Time Through except that these elements don’t disappear after the user has interacted with it. It’s still visible no matter how many times the user visits the screen or uses the function. This is good for important functions that will make the usage of the application more enjoyable. Since these elements always will be a part of the interface it’s important to clearly differentiate them from the regular content and to keep the instructions short and to the point. (Neil 2012)
Figure 6. First example is from the app Jamie Oliver Recipes and instructs the user to rotate the screen to display additional features. The second example is from the app Spring Pad and shows the user that additional notes can be created by pressing the “+”.

Discoverable
Figure 7 shows an example of a Discoverable. It can be used when the designer doesn’t want to clutter the screen with extra instructions. A drawback is however that it makes it harder for the user to find since they have to “stumble” on to the instruction. Theresa Neil (2012) recommends using this method sparingly.

Figure 7. Examples shows how the Discoverable tutorial have been used to refresh a feed on Ebay and Twitter.

How-To
Figure 8 shows an example of a How-to. These are simple explanations over key features in the application. They are static and contains text, screenshots and illustrations to explain how the application works. They can be made as one page or as multiple pages. (Neil 2012)
2.5 Walkthrough of Three Applications and their Help Systems

In this chapter three walkthroughs of three different communication apps will be presented to get a understanding of how modern communication apps introduces new users to their features and functions.

2.5.1 Gmail

Gmail is a web application which allows the user to manage, receive and send emails (Gmail, 2015). To introduce functions in Gmial’s application to new users they use a tour which consists of a total of five pages.

The first page presents the different functions and features that exists in the application. It’s on a basic level and they do not go into much depth, see figure 9. The second page informs the user that they can personalize their mailbox, see figure 10. The third page informs the user that Gmail is adapted for all platforms and that these are integrated with each other, see figure 11. The fourth page informs the user that they can chat and start video calls from their inbox, see figure 12. The last page simply states that the users Gmail account is now ready to use, see figure 13. After the tour the user have received three automated mails that the user can read if desired. These emails presents other functions that exists within the application. See figure 14.
**Figure 9. Gmail Help system, page 1**

**Figure 10. Gmail Help system, page 2**

**Figure 11. Gmail Help system, page 3**
2.5.2 Slack
Slack is a communication tool that allows teams to chat with one another in a fast and easy way (Slack, 2015). People outside of the organisation can be added to chat conversations and all the messages is searchable (Slack, 2015). To introduce new users to the system they have an initial Tour of the application. To go from one page to another the user have to click a button with phrasings like “Continue” and “Got it”.

Their first page welcomes the user to their application and explains the purpose of Slack and how it can simplify the users working life, see figure 15. Next page presents the different kinds of chat groups that exists within the application and it also tells the user that everything is searchable and indexed, see figure 16. The last page informs the user she is ready to use the application and also makes the user aware of their other applications for other platforms, see figure 17. When the user finishes the tour she can start using all the functions in the application.

Figure 15. Slack’s Help system, page 1.

Figure 16. Slack’s Help system, page 2.
There’s now three new floating elements in the design which are clickable, see figure 17. These three pages tells the user about Slacks use of channels and how it effects who sees the messages, see figure 18. When pressing the other two floating elements the user gets information about where to write messages, see figure 19, and where to edit account settings, see figure 20.

Figure 17. Slack’s Help system, page 3.

Figure 18. Slack’s Help system, in the app page 1.
Lastly the user, after clicking the three floating elements gets contacted by an automated user on Slack, called Slackbot, which continues to give tips to the user and also helps setting up the personal information displayed when sending massages, see figure 20.
2.5.3 Inky

Inky is a desktop-application to which the user can connect their email account and Inky then presents all the users emails in an easy and effective way. It sorts email in regards to relevance and can collect email from several different email accounts and then presents them in a unified mailbox. (Inky, 2015)

Inky uses a Help system in the form of a Tour, they present a large variety of functions and features and it consists of 9 pages. The first page welcomes the user and informs that a tour will take place, see figure 21. The second page explains how Inky works and how it handles the users emails, figure 22. The third page explains how Inkys’ ”smart view” system works, figure 23. The fourth page informs the user of the different features that are found in ”the docks”, see figure 24. The fifth page informs about ”the toolbar” thats available to the user, Figure 25. The sixth page explains the function of the ”smart cards” and how these are implemented in each email, seefigure 26. The seventh page explains how to customize the message list settings, see figure 26. The eighth page explains how Inky sorts the users’ email by relevance, see figure 27. The ninth page wishes the user to ”enjoy your email”, see Figure 28.
Figure 22. Inky's Help system, page 2.

Figure 23. Inky's Help system, page 3.

Figure 24. Inky's Help system, page 4.
Figure 25. Inky's Help system, page 5.

Figure 26. Inky's Help system, page 6.

Figure 27. Inky's Help system, page 7.
Figure 28. Inky’s Help system, page 8.

Figure 29. Inky’s Help system, page 9.
3. Method

This chapter describes the methods used in this study. With the use of a sketchbook and design rationale a design proposal was developed. This proposal was then evaluated in a user test. The result from this user test lead to an iteration of the design proposal which was then evaluated again using the same user test. Lastly the result from both design proposals and both user tests were analysed and formulated into recommendations for designing a help system for a communication app. The tasks and metrics were consistent through the two user tests to ensure that an comparison could be carried out to evaluate how and if the design had improved the user experience from one iteration to another. The purpose of the user tests where to see how the test users interacted with the help system developed for this paper.

3.1 Designprocess for Design Proposal 1

The designprocess for the first design proposal began with sketches that was based on and inspired by the design patterns and solution presented in chapter 2.4 and 2.5. Alongside creating these sketches thoughts, insights and ideas was written down and influenced the decisions that were made. One example of this was the realization that it would be better to develop a system that presented bits of information along the way instead of presenting everything right at the beginning of using the application. All sketches, ideas, thought and insights was documented in a Sketchbook and judged with Design rationale and are presented in full in Appendix 1 - Sketchbook. The sketches was of varying quality and aimed to examine different alternatives and ideas. The goal were to see how well they worked together with Briteback and how well they fulfilled their purpose. The concepts that best fit the purpose was developed further and examined more in detail. This process was also done with the sketchbook and design rationale. The process of developing new ideas and concepts continued until there were one idea left which I felt best met the purpose of a help system for a communication app. When I settled on one concept it was further developed as a digital sketch. This was because I wanted to see how it behaved in digital form, these digital sketches is also presented in Appendix 1 - Sketchbook. thereafter the concept were almost ready to be tested. Some minor changes in the design were made before hand drawing the result on paper to test it in the first user test. Some of the key design decisions from the design process are presented in Figure 28.
Figure 28. Key design decisions for design proposal 1.
3.2 The first User Test

Since the two user tests were very similar to ensure that a comparison could be made between their results a lot of the preparations and planning for the first test (UT1) was used in the second user test (UT2) as well. Therefore even though this chapter focuses on UT1 it will also include information which is applicable on UT2. In both UT1 and UT2 a low-fidelity paper-prototype where used to test the design. Since I wanted to examine an early design and gain an understanding of how users interacted with the help system a paper-prototype served as a good starting point and could provide good insights of the users experience (2.2.6). Furthermore there would not have been enough time to develop a functioning high-fidelity prototype that contained the necessary functionality even if this would have been desirable. The low-fidelity prototype were made out of paper and cardboard and used in both UT1 and UT2, see figure 29. The prototype was made to mimic an iPad for a couple of reasons: First it’s a technical device on which Briteback will be used often; Secondly its a manageable format to work with; lastly it was chosen because it is easier to realistically imitate the functions of a touchscreen than the interaction between a desktop computer and mouse. Since the user test focused on how the test user interacted with the help system while performing tasks in the application Briteback the applications design was printed and mounted on paper in the same manor as the design of the help system, figure 30.

![The paper-prototype used in UT1 and UT2](image-url)
Figure 30. Examples of Britebacks design printed on paper.

In UT1 the applications laptop view where used. This was chosen out of convenience and might have effected how the test users performed since more elements in the application where visible than if a touchscreen view where used. In UT2 the touchscreen view where used since after consulting with Briteback and evaluating the first user test we decided that this would reflect the actual user experience better.

3.2.1 Tasks
Six tasks where developed in consultation with Briteback. These where tasks typically performed by initial users. The tasks where also chosen to highlight the most unique features of the application since it was of interest to see if the test users used the help system to learn and understand these features. The tasks were written in swedish for the user tests, they can be found in Appendix 2 - Tasks & Forms. Here follows the tasks in their english translation.

1. To avoid getting interrupted all the time you want incoming emails to only be let through to your inbox at specific times. Do so you only receive emails at 09.00, 11.00 and 14.00.
2. You want emails from your boss Maria to remain uneffected by the delivery times you just set up. Her emails should be delivered to your inbox at any times.
3. Send an email to Anders with a reply deadline when the recipient should have answered at the latest. Deadline is 24/4.
4. Delete the folder "Till Anna".
5. Create an email that is uneffected by the delivery times and that will be sent 23/4 at 15.00.
6. Add the event "ledningmöte" to the calendar at 4/5 09.00.
3.2.2 The Choice Of Metrics
All metrics chosen for UT1 was also used in UT2. The performance metrics chosen to measure
effectiveness were Partial task success. That means that participants could finish the task without
doing all parts of the task correctly. If they did something wrong, or missed adding a particular
element to finish the task correctly that mistake did not result in complete failure. An example
of Partial task success were if the participant managed to send an email but failed to put the
thread in Riteithru. Even though the task was not done correctly the participant would not suffer
to much from this mistake if it was a life situation. Since the goal of the user test where to see
if, how and why the test users interacted with the help system the largest amount of data was
self-reported. The self-reported metrics used where SUS and Think-aloud. To complement this
data a semi-structured interview where held at the end of the session. This interview focused on
how the participant had experienced the help system and what they thought of it, see Appendix
3 - Semi-structured Interview. To able a comparison between user tests the metrics was the depen-
dent variable and the difference in performance and opinions where the independent variable.
The SUS was translated from english to Swedish to simplify for the participants and avoid them
misinterpreting the english phrasing.

3.2.3 Questions and Surveys
Before the test started the facilitator collected age, gender and experience level with similar appli-
cations from the participant. The experience level where collected by letting the participant rate
their own experience on a 5-point Likert scale where 1 were ”not good” and 5 were ”very good”,
no descriptive terms were given for the middle numbers.

The Experience Questions:
7. How would you rate your experience with using email applications?
8. How would you rate your experience with touch screen devices?
9. How would you rate your experience with technology in general?

In UT1 a mistake with the Likert scale was made, in the printed form given to the participant the
number one was paired with the phrase ”I agree completely” and 5 were paired with ”I disagree
completely”. This mistake was however fixed until UT2.

3.2.4 Participants
The recruitment criteria were consistent for both tests and were as following, age between 18-65,
working in a company that handles much of their communication by mail. Since the tests were
carried out in Swedish a good understanding of the Swedish language were also a requirement.
All participants in both UT1 and UT2 were offered coffee and a cinema ticket as a thank you for
participating. There were a total of six participants in UT1. Four of them were men and two were
women. Their age ranged from 24 to 50 years old with a mean of 36.8 years. The median was
37.5 years old. Three of the participant were under 30 years old while the other three were 45 or
older. Due to a mistake in the recording of experience levels this data will not be presented nor
part of the analysis. None of the participants had any connection to Briteback. Most of the parti-
cipants had no connection to the moderator. One of the participants was a student at Linköpings
University however this participant had employment outside of the studies in a company that
handled most of their communication by email.

3.2.5 Test Procedure
To help facilitate the user test an assistant that could manage the paper prototype was necessa-
ry because it would have been to much for one person to moderate the test at the same time as instructing the participant, measuring all the metrics and managing the paper-prototype. In UT1 two different people helped to manage the paper-prototype. One person assisted during four user tests while the other one assisted during the remaining two. The reason for it being two different people assisting were that none of them had the capability to devote an entire day to the user tests. As a thank you they received help with tests or project of their own. The same room was not used for all participants, instead the user tests where held at the participants offices or in conference rooms. This was to make it as easy for the participants as possible. The participants where always seated at a table in a undisturbed room with the test moderator seated in front of them and with the assistant controlling the prototype seated on their right.

Before the test started an introduction where held, informing the participant of their anonymity and their right to quit at any time, demographic data and experience levels where then collected. Then the test users where informed that the test would imitate the first time the user opened the application and that they therefore would get to click thru a tutorial. No further instructions regarding if the information in the help system would be useful to solve the tasks or if the users where required to interact with the help system where given. The test was developed in this way to see if the user by their own initiative chose to use the help system to more easily solve the tasks that where given. After the participant had clicked thru the tutorial they received one task at a time both written on paper and verbally. Questions from the participants were not answer during the test nor were assistance given. Some exceptions were made at times for questions regarding the english language in the application. Participants where asked to think-aloud when solving the tasks and to report verbally when they believed to have finished a task. After the tasks where solved the participant filled in a SUS-form and took part of a semi-structured interview regarding how, if and why they had integrated with the dot which where visible around the application. The equipment for the tests were a smartphone for audio recording, the paper prototype, pens and paper.

3.2.6 Data Collection
I moderated while measuring the different metrics, handing out tasks and answering questions. All audio was recorded and compiled after the tests, the comments stated during the think-aloud where separated from the comments stated during the semi-structured interview in the compilations. The Observations was written down during the test on a form that was divided into sections each containing one task so it would be easy to see which notes that was made during what task. The observation notes were compiled afterwards. Due to the amount of work that needed to be done by the moderator the notes from the tests focused on the non-verbal feedback from the participants, this could be facial expressions, frustration or other physical reactions.

3.3 Design process for Design Proposal 2
The design process for the second design proposal was very similar to the previous design process. Both the sketchbook and design rationale where used thru out the process. One difference is that more time were spent making digital sketches, these are presented together with the rest of the sketchbook in Appendix 1 - Sketchbook. The design process began with analyzing the data from the first user test. The most important insights was then used as problems that needed to be solved and served as the base from were ideas and different solution could form. The focus of the design process was to further develop the previous design proposal and to improve it based on the findings from UT1. The issues that had been discovered in the first user test was examined using in a structured way were one issue at a time was solved and further developed. When I had
addressed the issues deemed most important all the different solutions were put together and then further developed as a whole. When a clear solution had evolved I started doing digital sketches to sort out the details in the concept. It was the result of this this digital work that was evaluated in the second user test. Some of the key design decisions from the design process are presented in Figure 31.

Figure 31. Key design decisions for design proposal 2.
3.4 The Second User Test - UT2
In UT2 the design was made digital with vector graphics and then printed on paper. After consulting with Briteback a decision was made to change the design of Briteback to the touchscreen view to better imitate the actual user experience with the final product. We also decided to change some of the phrasing in the application which had been confusing for some of the test-users in UT1. We changed the word for sending a new email from "Compose" to "New" and also changed the name for editing folders from "Modify folder" to "Manage folders". The design of Briteback was printed on paper like it had been for UT1.

3.4.1 Tasks
The same tasks were used in UT2 as in UT1 and there were no adjustments done between them. A detailed description can be found in 3.2.1 Tasks

3.4.2 The Choice of Metrics
The same metrics were used in UT2 as in UT1 and there were no adjustments done between them. A detailed description can be found in 3.2.2 The choice of metrics.

3.4.3 Questions and Surveys
The same questions and surveys were used in UT2 as in UT1. Some adjustment was however made. The Likert scale for the experience level was adjusted so it was correctly named. The number 1 was paired with the phrase "Very good" and 5 was paired with the phrase "very bad". One change were made in the semi-structured interview, the question "Do you think the information presented in the help system was relevant?" was removed since it did not yield relevant data. The question was believed to have been biased and redundant. A detailed description of the other questions and surveys can be found in 3.2.3 Questions and surveys.

3.4.4 Participants
There were a total of five participants in UT2. Four were men and 1 was a women. Their age ranged from 22 to 28 with a mean of 25 years and an median of 25 years. They rated their experience with email applications on a scale between 1 and 5 were one were very good and 5 were very bad. The median was 2.4 and the mean was 2. The median for their experience with touchscreen devices was 2 and the mean was 2. The median for their experience with technology in general was 2.4 and the mean was 2. None of the participants had any connection to Briteback. Most of the participants had no connection to the moderator. Three of the participants was students at Linköpings University however two of them had employment outside of their studies that involved emailing. A more detailed description of the recruitment can be found in 3.2.4 Participants.

3.4.5 Test Procedure
The same test procedure were used in UT2 as in UT1. The assistant that helped with the paper-prototype in the second user test had the capability to devote an entire day to the study. This resulted in less time spent teaching people how the application worked which was very appreciated. A detailed description of the rest of the test procedure can be found in 3.2.5 Test procedure.

3.4.6 Data Collection
The same data collection were used in UT2 as in UT1 and there were no adjustments done between them. A detailed description can be found in 3.2.6 Data collection.
3.5 Analysis Methods
The mistake in naming the likert scales different states resulted in the experience data from UT1 being difficult to analyze since the alternatives could be interpreted as both positive and negative. None of the participants in UT1 rated their experience on either left or right side of the scale which should indicate average experience. However this might also be a sign of their insecurity regarding how to answer the question since the Likert scale was falsely named. With this in mind the data from the experience levels from UT1 was not part of the analysis.

The SUS for the participants were calculated according to Broke (1996). The notes from the observations was compiled into categories and then counted by frequency. The comments from the think-aloud protocol and the answers from the interview was treated in the same way. This made them easily manageable and easy to survey. There were one none-response in the think-aloud and interview data due to a mistake on my part resulting in the audio recording device failing to record the entire session. All other data from this participant is however intact.

3.5.1 The Recommendations
The data from UT1 and UT2 where compiled and then analyzed together with both design proposals. Data from both user tests were used and treated in the same way and the two design proposals were used as the main inspiration for creating the recommendation. The theories presented in the previous chapter where used to make sure that the recommendations were well founded in theory. When the recommendation had been formulated based on the data and the theory they were visualized with examples to be more easily understood.
4 Results
This chapter will report the results of the study and is divided into four parts. In the first chapter the design proposal for the first help system will be presented. The second chapter describes the data from the first user test, thereafter the third chapter presents the second design proposal which will be based on the findings from the previous user test. The fourth chapter will describe the data from the second user test.

4.1 Design Proposal 1
The design proposal for the help system consisted of two parts. The first part was a Tour with elements of Transparency in it. This was visible the first time the user opened the application. The second part of the help system was a Tip-feature which were an interactive dot by the name of Tom which was visible in the actual application and contained information which the user could take part of if they wished to.

The Tour can be seen in figure 32 and consisted of 5 pages which the user clicked thru. The first page showed Britebacks logotype and informed the user of the purpose of the application. The second page showed where some of the ordinary functions in Briteback, as sending email, changing your settings and modifying you folders could be found. It also informed the user that Briteback had more to offer than these functions. The third page consisted of text and informed the user of more unique features in Briteback. The fourth page introduced the second part of the help system, Tom. The user learned this dot would be visible around the application and would contain information about different features. The last page thanked the user for the time and lets the person get started with using the application.

When the user had finished the tour Briteback application was visible. Now the second part of the help system, Tom, was active and it was possible for the user to interact with it. See figure 33 and 34 for a visual presentation of the Tip-feature Tom.

Tom was placed beside different features around the application and when the user clicked on one of the dots a box opened from it. This box contained information about the specific feature and aimed to inform the user about it’s uses. Only one dot at a time were visible to decrease the possibility of Tom becoming an annoying element. When the user had clicked on the dot and closed the box the dot moved to highlight another function, this was then repeated until there wasn’t any more functions to highlight. This also meant that if the user didn’t interact with Tom the dot stayed at one place without moving. There were two separate places in the application these dots were visible; The main view which the user navigated from; and in the compose view, from which the user sent emails. In the main view the dot were placed at a total of two places; Settings and Calendar. In the compose view it were placed at a total of four places; Reply deadline, Send time, Rithethru list and meeting times. See figure 33 and 34 for a visualization of Toms possible movements.
Figure 32. Design proposal 1, the Tour.
Figure 33 and 34. Design proposal 1, the Tip-feature and an example of an opened information.

Figure 35. Design proposal 1, the possible placements of the Tip-feature in the main view.

Figure 36. Design proposal 1, the possible placements of the Tip-feature in the compose view.
4.2 Identified Issues From UT1
Here I will present the data from the first user test, UT1. All data from UT1 are presented in full in Appendix 5 - Data from UT1

4.2.1 Task Success
All 6 participants managed to complete task 1 successfully. 5 successfully completed task 2 while 1 failed. Task 3 resulted in 4 successful participants while 1 reached partial success and 1 failed. All participants where successful in task 4 whilst 2 where successful in task 5. 3 of the participants reached partial success in Task 5 and 1 failed. Task 6 had 3 successful participants and 3 (50%) that reached partial success.

4.2.2 Was the Tip-Feature in the Help System Used?
In most tasks the participants had the possibility of interacting with a dot that would give them advice and inform them of features that were good to know in the application. Using this extra help was completely optional. None of the participants used all parts of the tip-feature. Four did however use some parts of the tip-feature whilst two did not use the assistance at any times.

4.2.3 SUS
The SUS-score could range from 0, being the lowest score, to 100, being the highest score. The presentation of the SUS-score is based on Tullis and Albert (2008). The SUS-scores ranged from 75 to 92.5 with a mean of 80 and a median of 78.75. A visualization of the SUS-scores are found in figure 37.

4.2.4 Observations and Think Aloud

![Figure 37. Each participants SUS score in UT1](image)

Table 1 shows the observations and Think aloud regarding the help system maid across UT1 and how many participants that said or did it. Both positive and negative feedback were collected and are presented separately. Observations and comments regarding the Briteback application were also collected but are not presented in this chapter since it does not effect the help system in a direct way. This data can be found in Appendix 4 - Observation and Think aloud regarding Briteback.
Table 2 shows comments from the semi-structured interview which has been sorted into categories and are presented in the same manner as the observations and think-aloud were earlier. Only difference is that the column that showed if the category was from observations or think-aloud comments is gone since all categories in this table comes from the interview.

### Negative feedback

<table>
<thead>
<tr>
<th>Observation (O) or Think-aloud (TA)</th>
<th>Number of participants</th>
<th>Which participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did not see the information about modify folders in the Tour (O)</td>
<td>5</td>
<td>1, 2, 4, 5, 6</td>
</tr>
<tr>
<td>Did not see the information about sending emails in the tour (O)</td>
<td>4</td>
<td>1, 2, 4, 5</td>
</tr>
<tr>
<td>Thinks that the headlines in Tom is interactive and is connected with each menu (TA)</td>
<td>2</td>
<td>1, 5</td>
</tr>
<tr>
<td>Experiences problems with closing Toms information box (O)</td>
<td>2</td>
<td>4, 5</td>
</tr>
<tr>
<td>Does not assimilate the information in the help system (O)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>It takes a large amount of time before the user understands what Toms’ purpose is (O)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Perceives Tom as confusing (TA)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Does not understand why Tom only is visible at certain features (TA)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>but did no assimilate the information in the Tip-feature (O)</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

### Positive feedback

<table>
<thead>
<tr>
<th>Number of participants</th>
<th>Which participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>The first impression of Tom is positive (TA)</td>
<td>4</td>
</tr>
<tr>
<td>Assimilates’ the information in the help system (O)</td>
<td>2</td>
</tr>
<tr>
<td>Tries to use Tom when the user does not know what to do (O)</td>
<td>2</td>
</tr>
<tr>
<td>Mentions the Tip-feature by name (Tom) (TA)</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 1. The observations and think aloud from UT1 devided into categories.

### 4.2.6 Interview

Table 2 shows comments from the semi-structured interview which has been sorted into categories and are presented in the same manner as the observations and think-aloud were earlier. Only difference is that the column that showed if the category was from observations or think-aloud comments is gone since all categories in this table comes from the interview.

<table>
<thead>
<tr>
<th>Observation (O) or Think-aloud (TA)</th>
<th>Number of participants</th>
<th>Which participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prefers to use a Trial-and-error attitude</td>
<td>4</td>
<td>1, 2, 3, 5</td>
</tr>
<tr>
<td>Want to be able to restart/watch the information in Tom again at a later time</td>
<td>2</td>
<td>1, 2</td>
</tr>
<tr>
<td>Normally don’t use Help systems</td>
<td>2</td>
<td>2, 3</td>
</tr>
<tr>
<td>Normally does not read instructions</td>
<td>2</td>
<td>2, 3</td>
</tr>
<tr>
<td>Want Tom to be present in more places in the application</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Wants’ to be able to turn Tom off</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>To much text in the Tour</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Wants to try the application on their own and then watch some sort of introduction</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Wants more images in the Tour</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Wants the Tip-feature to present more basic functions</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Wants the Tip-feature to only present functions that is unique with the application in comparison to similar applications.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Experiences the Tip-feature as annoying</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Prefers a regular help menu instead of Tom</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Didn’t understand that the user had to interact directly with Tom to see the information.</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Does not like to be forced to do specific steps to find out what can be done in the application.</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>
4.3 Design Proposal 2

This design was an iteration of the first design proposal and had a similar design with two parts, a Tour and a Tip-feature. The first part can be seen in figure 38 and consisted of a tour, it differs from the first one since it didn’t contain the elements of transparency and it only consisted of three pages instead of five. To navigate between the pages the button in the middle was switched to an arrow on the side indicating there’s more information, the arrow is interactive. The first page presented Britebacks logotype together with the short statement “Email reinvented”. Thereafter follows a page introducing the help system visible around the application which has been renamed Zach. The color of Zach was switched to yellow to better attract the users attention. The last page presented the same functions as the first design proposal did but here they’re presented with less textual information and have been paired with pictograms to make them easier to quickly assimilate. On this page the arrow visible on the earlier pages have been switched to the text “done”. When clicking on this button the tour is over and the user sees Britebacks inbox for the first time.

When the user started to use the application the Tip-feature of the help system become active. For an visual presentation of the different elements in the Tip-feature see Figure 39 and 40. The dots were placed in the same places as in the first design proposal, at the menu and at the compose view. However, in this design all the dots were visible at the same time, giving the user the opportunity to choose what they want more information about. If the user interacted by clicking on one of the dots it would generate a box containing information about that function. The information in that box was redesigned and now contains a pictogram alongside the textual information. If the user choose not to interact with any of the dots they would remain visible but if the user interacted with them they would disappear after the box with information was removed. The first time the user opened the menu on their left containing navigation to the settings panel and the calendar the dot beside “settings” expanded it’s box by itself. This was to make the user understand that the dots led to information. When removing this box the other dots would not expand by themselves.

| Didn’t understand that the user had to interact directly with Tom to see the information. | 1 | 3 |
| Does not like to be forced to do specific steps to find out what can be done in the application. | 1 | 3 |
| Did not see Tom | 1 | 4 |
| Did not understand what Tom did until the end | 1 | 5 |
| Would have wanted a clearer description of Tom’s function | 1 | 5 |

**Positive feedback**

| The information in Tom was relevant | 4 | 1, 3, 4, 5 |
| Likes the design of Tom | 4 | 1, 3, 4, 5 |
| Likes the way that information and features are presented with Tom | 3 | 1, 2, 4 |
| Likes that Tom appears during the using of the application | 3 | 1, 4, 5 |
| Short and relevant information in Tom | 2 | 1, 5 |
| Became curious about Tom | 1 | 1 |
| Thinks that Tom fits a Trial-and-error attitude | 1 | 1 |
| Prefers Tom instead of an regular help-menu | 1 | 5 |

*Table 2. Answers from the semi-structured interview from UT1 divided into categories.*
Figure 38. Design proposal 2, the Tour.

Figure 39 and 40. Design proposal 2, the Tip-feature and an example of an opened information box.
4.4 Identified Issues from UT2
Here I will present the data from the second user test, UT2. All data from UT2 can be found in Appendix 6 - Data from UT2

4.4.1 Task Success
All 5 participants completed task 1 successfully. 4 participants completed task 2 successfully while 1 failed. Task 3 resulted in 3 successful participants and 2 that reached partial success. All participants were successful in task 4. 2 participants successfully solved task 5 and 3 reached partial success. All 5 participants successfully completed task 6.

4.4.2 Was the Tip-Feature in the Help System Used?
None (0%) of the participants used any voluntary parts of the help system.

4.4.3 SUS
The SUS-score can range from 0, the lowest score, to 100, the highest score. The presentation of the SUS-score is based on Tullis and Albert (2008). The SUS-scores in UT2 ranged from 60 to 87.5 with a mean of 71.88 and a median of 77.5. A visualization of the SUS-scores are found in figure 41.

4.4.4 Observations and Think Aloud
Table 3 shows the observations and comments regarding the help system maid during UT2 and how many participants that said or did it. Both positive and negative feedback were collected and are presented separately in the table. Observations and comments regarding the Briteback application were also collected but are not presented in this chapter since it does not effect the help system in a direct way. This data can be found in Appendix 4- Observations and Think Aloud regarding Briteback

4.4.6 Interview

<table>
<thead>
<tr>
<th>Observation (O) or Think-aloud (TA)</th>
<th>Number of participants</th>
<th>Which participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doesn’t use Zach voluntary</td>
<td>(O)</td>
<td>1</td>
</tr>
<tr>
<td>Tries to use the headlines in Zach as buttons</td>
<td>(O)</td>
<td>1</td>
</tr>
<tr>
<td>Thought that the tips from Zach (Settings) came from the yellow dot that is still visible after viewing it</td>
<td>(TA)</td>
<td>1</td>
</tr>
<tr>
<td>Understands what the application does after finishing the Tour</td>
<td>(O)</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 3. The observations and think aloud from UT2 devided into categories
Table 4 shows comments from the semi-structured interview which has been sorted into categories and are presented in the same manner as the observations and think-aloud were earlier. Only difference is that the column that showed if the category was from observations or think-aloud comments is gone since all categories in this table comes from the interview.

<table>
<thead>
<tr>
<th>Negative feedback</th>
<th>Number of participants</th>
<th>Which participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Didn’t understand that “big Zach” in the tour was the same as the “small Zachs” in the Tip-feature</td>
<td>3</td>
<td>2, 4, 5</td>
</tr>
<tr>
<td>trouble with understanding Zachs’ purpose</td>
<td>3</td>
<td>3, 4, 5</td>
</tr>
<tr>
<td>Wants’ to start using the application right away</td>
<td>2</td>
<td>1, 3</td>
</tr>
<tr>
<td>Normally doesn’t read instructions/help-systems</td>
<td>2</td>
<td>1, 5</td>
</tr>
<tr>
<td>Would have wanted to be able to interact with the information in the Tour to get more information</td>
<td>2</td>
<td>2, 5</td>
</tr>
<tr>
<td>Didn’t understand that Zach was interactive</td>
<td>2</td>
<td>4, 5</td>
</tr>
<tr>
<td>Wants’ to be able to turn Zach off</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Didnät need Zach to understand the features it highlighted</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Wanted to have to click on Zach in the beginning to understand how it worked</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Wants to be able to restart Zach</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Wants more information in the Tour</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Positive feedback</th>
<th>Number of participants</th>
<th>Which participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was not bothered by Zach</td>
<td>5</td>
<td>1, 2, 3, 4, 5</td>
</tr>
<tr>
<td>Likes a help system that is design in this manner</td>
<td>4</td>
<td>1, 2, 3, 4</td>
</tr>
<tr>
<td>Felt that the Tour in the beginning gave a clear picture of the application</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Liked that Zach was present from the beginning</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Appreciated that the Tips was present in the application at first use</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 4. Answers from the semi-structured interview from UT2 divided into categories.
5. Analysis
In this chapter I will try to answer the problem statements, this will be done based on both design proposals and data from both user tests. The problem statements will be answered one at a time and I will present recommendations to take into account when developing a help system for a communication app.

5.1 How can a Help System for a Communication App be Designed to Maximize Perceived Usefulness of The Help System
Here i will present three recommendations that aims to answer the first problem statement.

5.1.1 Give the User an Interactive Way to Gain More Information
In the user tests one major problem with help systems showed to be that most participants stated that they don’t usually use them. They mostly click right through them or similar instructions without reading it carefully or even at all. This was stated explicitly by 4 out of 10 participants and several of the other participants stated things closely related to it. A difference could however be observed between the first and the second user test. The design for the first user test did not contain anything else but textual information, and this generated statements regarding it being to much text and that the participants normally wouldn't spend this much time reading. In the second user test much of the text had however been reduced and replaced with pictograms. This made the tour much easier for the participants to quickly click thru. And even though they spent less time looking at the information many of the participants in the second user test felt they got a good idea of what they could do with the application. Despite this some of the participants wanted to know more about the functions presented than the pictograms and reduced text could offer. But since the first user test had shown that presenting more information could make participants less likely to actually reading it all this would probably not be a good thing to do. One of the participant that wanted to know more about the features wanted to be able to interact with the information to find out more. This had also been addressed in studies which has shown that participants usually preferred an interactive help system rather than other kinds (2.4.1).

Recommendation: Give the user a choice to interact with the information in the tutorial. Most of the users will click through the information fast and therefor it’s important to make the information easily understandable at a single glance. Some of the users might however want to find out more about the features that are presented. Therefor there should be an option for the user to click on the features presented and gain more information. This could for example be done with a dialog box opening from the feature that contains a longer more descriptive text or an animation describing the feature. A visualization how this could be designed can be seen in figure 42-44.
5.1.2 Minimize the Amount of Text

As stated previously the participants stated that they rarely read the information presented in help systems. Regarding the first design proposal of the help system one of the participants derived this to there being to much text on each page of the tour. This participant would prefer the Tour containing more images that would let the user understand the information by only looking at it instead of having to read it. It was the tour visible in the beginning of using the system that received critique regarding to much information. The Tip-feature that was visible around the application did not receive any statements regarding it containing to much information or text. The Tip-feature were however made to contain short descriptions about each function due their small surface from the start. The second design proposal, that contained more pictograms and less text, made most of the participants feel they more easily could assimilate the information. According to (2.4) one big issue with help systems is that it doesn't let the user focus on what they are trying to accomplish. It demands their attention and this can make the experience with the help system frustrating.

Recommendation: Minimize the amount of text. By doing this the help system will be easier for the user to understand and most importantly it will be understood much quicker. Furthermore if the user feels that the information presented in the help system is easy to assimilate it would probably make for a less frustrating experience. This is because the user would have to spend less time focusing on the help system and more time focusing on what he or she is trying to achieve. Exchange text with pictograms as far as possible and make sure the necessary text is well formulated and as short as possible. A visualization how this could be designed can be seen in figure 45 and 46.

Figure 42-44. The static tour used in the second user test with an interactive way to gain more information. If a desktop computer is used the extra information could be activated when hovering above the icon. On a touchscreen device it could be activated when clicking on the icon.
5.1.3 Prioritize the Content

The user tests showed that most of the participants felt that the information that was presented in the Tour was relevant for them to know. They felt that it gave them an understanding about what they could do with the application. This was explicitly stated for the design proposal evaluated in the second user test. This shows that the way that the information was prioritized in the design process of the second design proposal was well done. Even though there were more information that could be relevant for the user to know a decision was made to only highlight the features that were unique for Briteback. When designing a tour (2.4.2) claims that it’s important that the most important features the application and the ones most relevant to the user goals are presented.

Recommendation: Prioritize the content. If the user feel that the information presented in the help system isn’t relevant for a specific step in the application they most likely won’t use it. The information that is presented should contain the most important information and the features that are most relevant to the user goals. However I would like to add a third criteria, the features that are presented should also give a clear understanding of what the application’s purpose is. If all these three goals are achieved it would most likely result in information that the user feels are very relevant and would gain him or her to know. A visualization how this could be designed can be seen in figure 47 and 48.

Figure 45 and 46. The first screen of the Tour when only containing text and the same screen but with less text and more pictograms.

Figure 47 and 48. Less information however the information presented is more relevant for the user. It only contain the most important information and it creates a image of what the app does.
5.2 How can a Help System for a Communication App be Designed to Minimize Perceived Annoyance of the Help System

Here I will present four recommendations that aims to answer the second problem statement.

5.2.1 Encourage a Trial-And-Error Attitude

A majority of the participants declared that they usually had a trial-and-error attitude towards new applications. This means that they like to look around in the app and try to solve what it is they want before accepting help. They don’t mind if they don’t get it right the first time they use an application since they like to find out the answers on their own. The participants wanted to be able to use the application right away and then, if they wanted to, get help or learn more about the features in the application. In the first user test four out of six participants expressed a positive attitude towards the Tip-feature in the help system. They didn’t feel it was annoying or distracting, most actually preferred this kind of feature in the help system instead of receiving all information when first introduced to the application. One of the participant claimed that it would have caused irritation if the help system had been forcing the user to learn the application in certain steps. With this said none of the participant minded the Tour in the beginning since it gave them an understanding of what the application could do. Across both user test many of the participants stated that they felt as if they would use the Tip-feature after some time. They liked that it was compatible with their trial-and-error attitude and that they didn’t have to interact with it if they didn’t want to. Grossman, Fitzmaurice and Attar (2.2.1 - learnability) discusses Learning as a function of experience and how this effects the kind of user that already is familiar with a domain.

Recommendation: Encourage a Trial-and-error attitude. Most users doesn’t like being told exactly what to do, and especially those that already are familiar with the domain in which the application resides. They like to look around themselves and to feel that they understand the application before accepting any assistance. If they get this opportunity they might be more likely to use the help system when they feel they could use some extra help. This could create a better platform for teaching an applications users the full capacity of the application. A effective way of doing this is to use a series of tips in the application which the users them selves can choose to interact with. When doing this it is still important to remember that learning takes place place even though there isn’t an active help system teaching the user what to do. A visualization how this could be designed can be seen in figure 49 and 50.

Figure 49 and 50. Instead of presenting all functions in the beginning as can be seen in the figure to the left create a help system that doesn’t interfere with the normal usage of the application. The users can then choose to take part of the information if they want to. This reduces annoyance since the user have control.
5.2.2 Make the Help System’s Purpose Clear
In both user test the participants had trouble understanding the Tip-feature’s function. This created quite a lot of confusion. This was particularly an issue for the design proposal in the second user test. This might have been since the participants in the first user test spent more time carefully reading the instructions, something most stated wouldn’t have been the case if they used it outside of the user test. There were participants in both the first and the second user test that didn’t understand that the dot indicating the Tip-feature were an interactive element. In the second user test there were also several participants that didn’t understand that the small dot in the actual application had anything to do with the larger one that had been used to introduce the feature. Several participant wanted to interact with the dot in the tour to really have understood how it worked.

*Recommendation*: Make the help system’s purpose clear. If the user doesn’t understand what the help system does then it doesn’t matter if everything else is excellent. This can be done with adding a information symbol, or something else that indicates there are information to get, to elements that contain this information. It could also be achieved with an animation on a digital version of the second design proposal where the element for example vibrates or changes color to indicate that it’s interactive. A visualization how this could be designed can be seen in figure 51.

![Figure 51. The same dot as the one used in the help system but with an information symbol in it to make it’s purpose clearer.](image)

5.2.3 Let the User Decide
In the first user test 4 out of 6 participants stated that they didn’t find the tip-feature annoying and in the second user test all participants explicitly said that they wasn’t annoyed by it. Still several users from both user tests wanted the option to turn off the Tip-feature of the help-system. There were also participants that wanted to be able to turn the help system back on at a later time. This is also stated in (2.4.2) but regarding a Tour in particular.

*Recommendation*: Let the user decide. Give the user the choice to take part of the information in help system, it will reduce annoyance for users that probably wouldn’t take part of the information anyway. This can be done by adding a “remove all tips button” on the dialog boxes that contains the tips. A button like that could also redirect the user to the settings view where a more detailed options could be presented. Here it also should be possible to take the tour once again and to turn the Tip-feature back on if the user wishes. A visualization how this could be designed can be seen in figure 52 and 53.
5.2.4 Use Interactivity to Teach

Several participants in both the first and the second user test had trouble understanding the Tip-features purpose. Some participants hadn’t understood it at all. In the second user test there were also participants that had difficulties understanding that the big dot in the tour represented the small dot in the actual application. There were participants in both user tests that expected to be able to interact with the information in the entire help system since they tried to click on different headlines and pictograms. One participant also wanted to interact with the tip-feature that was presented in the tour to learn what it did. In (2.4 - help systems) it is stated that Interactive tutorials is often used to give the user a deeper understanding of an application and that research have found interactive tutorials to generate the best results.

Recommendation: Use interactivity to teach. Since many participants tried to interact with parts in the help system on their own initiative it shows that it’s somewhat expected that the information presented is interactive. This can be done by making the headlines and pictograms in the tour contain more information as described in 5.1.1. Another thing to do could be that the first time the user encounters the Tip-feature in the tour it has to be clicked on in the same manner as in the application. At this stage a dialog box could open which explains the Tip-features function. This would probably be sufficient for teaching the user how it works and why it should be used. A visualization how this could be designed can be seen in figure 54 and 55.

Figure 52 and 53. The figure on the right doesn’t allow the user to cancel all tips. A simple button with text is added to the lower left corner of the figure to the right, allowing the user to choose if the tips should be visible.

Figure 54 and 55. The next button won’t come up until the user has clicked on the dot. This will teach the user how the dot works and how they should interact with it.
6. Discussion
This chapter contains discussions about the methods used in this study, how the results in founded in theory and if they can be generalized. Thereafter follows a discussion about the value of the study in a wider context and some recommendations for the future.

6.1 Method
Here the methods used in this study will be discussed. First the methods used in the design process will be discussed and thereafter follows a discussion about the methods used in the User tests. Then a reflection about the validity and reliability of the study will be presented and lastly the study's value in a wider context.

6.2.1 Design Method
Here I will discuss the methods used in the design process for developing both design proposal 1 and design proposal 2.

The design process focused on developing design proposals based on the theory and examples regarding help systems that are presented in 2.4 - Help systems; 2.5 Walkthrough of Three Applications and Their Help Systems. To do this a sketchbook was used to document the ideas which was then graded and sorted by the use of Design Rational. Similarly to what is stated by Arvola (2014) and Greenberg et al. (2012) this process made the otherwise unstructured design process much easier to understand. The sketchbook and design rationale also made it easier to keep track of the different ideas and to keep a structure to the design process. It was a sufficient method to use when developing design proposals since it allowed for the freedom needed in a design process but at the same time offered structure which makes the results traceable and decision points clear. A design process contains a clear bias since it's the designer that has interpreted the theory and made the choices that has shaped the different design proposals. By using a sketchbook and design rationale these choices has however been made visible and by doing so it doesn't have to big of an impact on the reliability of the study. Since the design process for the different design proposals where nearly identical this also strengthen the reliability of the study. The design process for the second design proposal were more focused on sketching digitally than the design process for the first design proposal. This should however not have effected the study's reliability since it was done with design rationale and that all sketches was saved and treated in the same way as the other sketches.

6.2.2 User Tests
Here i will discuss the methods used in the User tests and thereafter a discussion about the study's validity and reliability will follow.

Choices Effecting the User Test:
The purpose of the user tests were to evaluate how the test-users experienced the help system and if the test-users used it at all. Therefor the test was designed so that the users received tasks to solve but what the moderator looked closely at were if they interacted with the help system when solving these tasks. This method worked well and especially due to the semistructured interview that were held at the end of the session. It created a quite natural behavior towards the help system were many participants choose not to interact with it.

The performance metric used were partial task success. Originally the performance metric Time on task were also considered to use but since Tullis and Albert (2008) states that it creates diffi-
culties when also using Think-aloud it was discarded. I decided to focus more on the self reported
metrics since the main interest of the study was how the users experienced the help system and
not how effective or efficient the GUI of Briteback was. This is stated by Tullis and Albert (2012)
to be the most efficient way to gain insights of a users personal experience of their user experience.
This decision worked well and combined with the semi-structured interview it generated useful
data. Another reason for not including more performance metrics were that it would be difficult
to generate accurate data since the study used a paper-prototype which for example greatly would
have effected the time it took participants to finish a task. Rudd, Stern and Isensee (1996) pre-

There were one metric that were especially important for the study and that was the think-aloud
protocol since it gave good insight in how the user experienced the help-system, especially in the
first user test. The semi-structured interview however generated the most amount of valuable data
and was also a vital part of this study. It created a platform for unexpected opinions and a more
exploratory approach similar to what Bryman (2008) claims as a strength of the semi-structu-
red interview. It revealed to be very useful to have more of an open discussion about the users
thoughts and feelings towards the help system than an open ended question.

The number of participant was quite low in this study. In UT1 there were 6 and in UT 5 there
were 5. According to Tullis and Albert (2008) this is however not an issue since it is enough parti-
cipants to generate valuable data. Especially combined with an iterative design process which aims
to creating iterations of the design and then be tested again.

Reliability
Reliability of a study means that the measures are repeatable and consistent so that someone else,
if they wished, could carry out an indentical study that creates the same results. One thing that
plays a key role in determining reliability is if there have been any errors made when measuring.
In this study there were a mistake made when measuring the demographic data in the first user
test. The descriptive terms on the likert scale of the experience levels were confusingly named.
This caused the data from the experience level from the first user test to be disregarded. Even
though this is a sever issue the data from the experience levels was never intended to be part of the
analysis, its’ purpose was to give an understanding of how accustomed the participants were with
similar applications and the domain itself. This mistake with the likert scale was fixed until the
second user test. This did not effect the result of the study in any way but it shows that a proper
pilot study should have been carried out to make sure that all measurements and forms were
done correctly. There were also an issue with one of the recordings from one user test in UT1. The
recording device stopped recording after a few minutes and this was not discovered until after the
session was over. The verbal information from this session was there for not part of the analysis, all
written information was however intact and used.

To strengthen the reliability of the study several precautions were teken. The same paper-proto-
type were used to make sure that the test-users didn’t experience different difficulties due to the
prototype. In both user tests the same tasks and the same criterias for success were used. The same
questions for measuring experience levels were used and the SUS-form were identical. All metrics
where used in both test and the semi-structured interview were also identical except one question
that hade shown to be redundant when used in the first user test. The participants had already
given an answer to the question by answering the other questions. Since this change didn’t effect
the result from the interview in any observable way it shows that it didn’t have any effected on the
studies reliability.
The same room was not used in all user tests since we performed them were it was most convenient for the test-users. However the tests were always performed in an undisturbed room where there were a table on which the participant could manage the prototype. Since the change in location didn't effect the test procedure this were deemed not to effect the studies reliability in a sever manner. Otherwise the same test procedure were used in both test with only some minor changes to the second one. All tasks that the participants performed where given to them in written and verbal form to strengthen the reliability. This was however not done for the introduction which was only given in verbal form to the participant. This could have strengthen the reliability of the study further.

The results from the user tests were calculated in the same manner using the same program and the data was inserted into the program by double-checking all numbers to minimize the risk for a mistake. A more established way of taking notes would have strengthen the reliability slightly. A form were used that were divided into section were each task had its’ own section. This offered structure and made the note taking easier and more structured.

The same assistants were not used in all tests which had an effect on the reliability. However their task with handling the paper prototype were not that difficult and there were no problem with getting them up to speed and understanding how the application worked. However there is bound to be some noise the first time someone does something. Therefor it would have been better to have the same person assist in both user test but since this demanded to much time it was not a possibility.

**External Validity**

The external validity of a study determines if it’s generalizable, meaning if it’s result is applicable to other people in other situations. This is mainly dependent on two thing, how realistically the tests was carried out and how representative the test-users were for a larger population or target group. Common threats to the external validity is therefor if the tests were carried out in such a way that would not realistically cohere with any real situation or if the participants in the study wasn’t representative for the target group. Another threat concerns the sample size and choice of participants. The sample size cannot be to small if one is to make assumptions that aims to be correctly applicable to a larger population or target group. To be able to generalize the results to a larger audience the participants in the study must also have been chosen at random.

Since this study was formative and aimed to be the first step in developing a help system for a communication app the demand for external validity is not as high as it would have been for a summative study. This is because the result from this study is not meant to be generalized to a wider population, it is meant to serve as insight used when design a help system for a communication app. There are still demands for external validity though, and therefor these threats have been considered. Both user tests were designed to mimic a realistic situation in which users would most likely find them selves. However a paper prototype was used which decreases the external validity since no one are going to use Briteback on a paper prototype.

Regarding the second threat concerning sample size and how they were chosen this is not really a concern for this study since i wanted input on a specific design at a early stage. The study never aimed towards evaluating something that would be generalized. The result were used to make an iteration of a design and be part of a design process and therefor it seamed better to focus the user test on specifically chosen participants as is recommended by Tullis and Albert (2008). It would
have been possible to perform a test with a larger sample size but this would have taken too much
time to be possible to combine with an iterative design process within the timeframe of this study.
Furthermore I doubt that a larger sample size would have generated more valuable data since the
design that was tested were at such an early stage and the amount of data I received was enough
to further develop the design proposals. A larger amount of participants could even have obstruc-
ted the design process since the time it would have taken to process it wouldn’t have fitted inside
this study’s timeframe. Another option could have been to only develop one design proposal and
only perform one user test. This user test could then have been carried out with a larger sample
size and have generated a better external validity. It was however decided that developing several
design proposal based on input from fewer users would be more valuable this early in the design
process and more aligned with Britebacks need.

Internal Validity
Internal validity in a study means that there are evidence that the observations made in the study
actually were caused by the actions and choices made in the study. That the results from the
observations was not caused by some other circumstance or causal relationship. The most promi-
nent threat to the internal validity of a study is if the observations can be derived to something
else then was performed in the study. The internal validity in this study was quite good, however
there are some issues that needs to be addressed. The study used a paper-prototype since this was
deemed to give the most valuable information at this stage of the designprocess. However the
paper-prototype is likely to have caused quite many navigational problems that effected the test
users result in completing the tasks and navigating around the application. This is however not
a severe issue since the user tests focused on how the users interacted with the help system and
therefor the tasks were used to create a platform for this interaction.

A more severe issue was that the Tip-feature in the help system were also affected by the choice
of prototype. Some of the participants didn’t comprehend that the dot was interactive and some
didn’t even see it since they thought it was part of the rest of the application. This is likely to have
been the result of it being made in paper and not behaving in such a manner that is expected by a
digital element. In a digital version it could have been animated, it could have pulsated or chang-
ed color which would probably have made it more visible than it was when it was made out of pa-
per. Even though the Tip-feature was effected by the choice of prototype it still generated a lot of
valuable data regarding the Tip-feature. Furthermore it would not have been a possibility to create
a functioning high-fidelity prototype in the timeframe of this study. In both user tests the same
paper prototype was used which increases the internal validity slightly since the result from the
tests therefor can be compared even if the prototype effected the results. One other thing that had
an impact on the internal validity was that between the user tests we decided to change Britebacks
design from the laptop view to the touchscreen view. This created new navigational problems for
the participants in UT2 especially when navigating between the menu and the main window of
the application. This should however not had an impact on how the participants experienced the
help system and therefor it should not create a severe issue for the internal validity.

6.2 Results
Here I will discuss the design proposals connection to the theories presented in (2.4) and I will
also discuss any unexpected results based on the findings from both user tests.

The first design proposal were based on the theories presented in 2. Theory. The Tour (2.4), Tip
(2.4) and Transparency (2.4) were the biggest influences. Inspiration were also gathered from the
examples of modern help systems (2.5). This makes the design proposals grounded in theory and should work well for it’s purpose. Since the second design proposal is an iteration of the first it should keep it’s relevance and at the same time be improved since changes in the design are based on how it was experience by the test-users. The result from both these designs and both user tests are then the foundation of the recommendations. The recommendations from this study is however mainly applicable to the Briteback application due to limited generalizability. They can however be used as inspiration and a starting point when developing a help system for another application.

A surprising result from the study was that a clear majority of participants stated that they don’t normally use help system that exists in an application. They much rather prefer a Trial-and-Error attitude meaning that they like to try the application themselves and see if they can figure it out on their own. Neil (2012) claims that a tour is the best way to instruct a new user in a new system however most participants stated that they normally clicks thru the initial Tour in a new system in seconds. Most participants also stated regarding the initial Tour in the help system that they normally clicked through it in seconds. All participants but one stated that they didn’t mind the help system created for this study. They liked that it wasn’t intrusive and that it didn’t force them to use it. In the second user test none of the participants used the Tip-feature of the help system but they all stated that they liked it and that they still wanted it to be there. Many of the participants in both user tests wanted to be able to access the help system at a later time and for example activate the tip-feature after using the application a larger amount of time. These findings points to one major flaw that seems to exist in the litteratur regarding help-systems (Shamsuddin, Syed-Mohamad, Sulaiman, 2014; Neil 2012). The users simply doesn’t use the them. Users does however seem to have some interest in learning more about an application but they want to receive this information at a later time and not in the beginning of using the application.

The SUS-scores from the user tests gives a small indication of Britebacks usability but it is difficult to say anything about how the help system effected this score. The SUS-score would have been more interesting to examine closer if there would have been a larger sample size or if the design of the application would have stayed the same during both tests.

6.3 The Future

Since technology and applications are becoming a larger and larger part of everyones life it’s important to make sure that they are easy to use and learn. This is especially important for applications that are trying to make people communicate more efficient. Because no matter how smart an application is and no matter how much good it can do for people it will be useless if it’s to difficult to learn. There are a lot of frustration from people that are directed towards technology and applications, especially when people find it difficult to use. The results from this study could help to create a more efficient way for people to utilize these applications to simplify users everyday life. If help systems were more efficient in teaching users how the applications work this could make them more accessible for a larger amount people. If we figured out a way to more effectively teach our users to utilize the technology this will create much happier people whom are less stressed and more easily can utilize technology to make their everyday life better. There would also be a possibility in developing help systems that are more focused on elders which would create the possibility of making this technology accessible for them. To do this it’s important to further evaluate help systems and to determine issues that were not discovered in this study. It would be interesting to further examine how people really uses help systems, when they do it and why. It would also be interesting to examine if users of modern communication applications learns anything from the help systems that are presented in these applications.
The help system that is developed in this study for Briteback should be further developed and continuously tested throughout the design process. The next step would be to create a functioning high-fidelity prototype to evaluate further. It would be interesting to create two separate prototypes, one with the help system and one without. And then let two sets of participants do the same set of tasks but on the different versions. This would give a good understanding about how the help system really affects the experience of the application.
Referenser:


Sketchbook

Part I
Sketches for the first design proposal
#3

I hjälp-systemet ser du detta:

Klicka för tips

#4

Stänga av tips i settings

+ Ger kontroll

#6

Se till att svara på frågan! Varför skulle jag vilja använda delva funktionen?

+ Skapa förståelse för funktionen

Användaren inte normalt använda

#7

Ta upp i Tour:

Bestäm hur du får mail

Upphänget med fakta?

#8

Använd fakta/anledningen till bb, bortslösande och tid man

Kanske något till vanliga sak

Ger svar på #6

+ lärarekt + motiverande
+ enkelt + intressant
- lite onödigt
De 3 första insidorna

**Om BB**
Allmänt om banke
bokom briteback

**Integröd**
Allverika kanaler
i en inbox

**Hjälp systemet**
Introducera
hjälp systemet
Kommer hjä

Utveckla detta vidare

Facebook

Sms

mail2

Briteback

Telefon

mail1

All integrated in one
less stress, more family

Lyfta från
skillnaden
på mailhantering

Så hår
mycket
lägger vi
på att
köra
vi
mail

+skapar
förståelse

Så hår
mycket
lägger vi
på att
köra
vi
mail

5
med briteback

2 vill folk
läsa detta

Klicka för att
se briteback's
resultat
**12** Presentera alla funktioner i tour

- Om **bb** → **integrerat** → **delivery times**
- **Deadline**
- **meeting**
- **Send time**

-För mycket information för användaren.
-Användaren klickar bara igenom
-Tjäkigt

---

**13.2**

+ Testligare + Skillnader

**svårt att koppla?**

+ presentation av app och koncept

! Testa detta

---

**13** How to/Trasparency

+ Enkelt + kan göras tydligt

+ Snabbare än en vanlig box

**BB**

- mail
- calendar
- Setting
- Inbox

**Box**

- Compose
- -
- -
- -

**How is**

- This is Brite back
- Different accounts

- Vaellad
- Compose new emails

- This is a Brite back
- Different accounts

- ha fokus på att bara presentera "de stora" koncepten övergripande
- Detaljerade instruktioner tas väl inte in?
Vad är viktigt att plantera i ett tidigt stadie?

- Integrerat – chat/email/sms
- Delivery times
- Rikethrough
- Kalender

Från sidan

Briteback

Let's make email efficient

Let's kick it!

Vill du ställa in ditt bänk?

Starta turnén

Avsluta turnén nu

Deliverity times

Koppla på stör kontor

Ger kontroll till användaren

Oändligt styg, behöver det var

Valbar
#17 hjälpsystemet i appen

Betyser mer i detalj, viktiga funktioner och även de som inte fick plats i text.

Tanken är

- presentera inte hur funktioner funkar utan presentera ett hjälpsystem
- lättare att ta tillsig
- produkt inten
- ingen minas allt från början anda

#18 Möjliga symbols

0
- rekvisat
- kan vara otydligt
- störst

- för sömnade fylla som blinkar öv
het som det tipsas

#19 olika symbols

Stoppa en karaktär?

- ska det tipsa blir en roligare gej?

Vill ha någon sorts företeelse eller förändring i ikonen

- snurrande hjul?

Gör ett "spell" av det. något som förändras allt eftersom användaren ler sig mer
#19.2

- pusselbitar

"lägg tillbaka-
pusslet?"

- lite oserioöst?
- orkar folk verkligen

hålla på

#22

- konstig

snake degree

#21

+ lite tolkning
+ hafna andra

- Rebecca

+ lite element

+ snabb

+ enkel

+ lite påträngande

Du har använt
76% av BBis
funktioner,
se vilka du missat

+ visar att
+ öppen ny
+ kommunik till att
mer att

+ lite roliga

+ använda till att

+ idra sig alla
Delivery times

Integrated chat tools

...and more

And much more look for our help system which will make you give as much as possible from Britell's convenience.

#25

Ok. How far can you do with Britell's communication tool?

Back to communication becomes as less stressful part of your working life, too.

 british
Briteback

He helps the basics
- Send emails
- Set delivery times

The communication tool that makes working life less stressful and makes room for the important things.

The basics:
- Send emails
- Your calendar
- Set delivery times and a lot more

Send emails
- Integrated calendar
- Beside ordinary functions, Briteback has a lot of smart ways to make working life more efficient and less stressful.

This is Tom

He's a circle.
He can tell you new and our smart functions once you get started.
And sometimes he'll just tell you awesome facts about how to reduce stress and make your life easier.
He's cool.

Delivery times
1.5h of every day is wasted

This is Tom, he's a circle.
There's a lot more functions in Brikeshock. But this is enough to get started.

However, we would like you to meet Tom.

This is Tom.

Meet Tom.

There is a lot more functions in Brikeshock. But this is enough to get started.

In the meantime we would like you to meet Tom.

There is a lot more functions in Brikeshock. But this is enough to get started.

Get email when you want it!

There is a lot more functions in Brikeshock. But this is enough to get started.

Get email when you want it!

However, to make sure you find all the functions in the future, we would like you to meet Tom.

This is Tom.

However, there is one more feature we would like you to know about.

To help you find and utilize all the functions in Brikeshock in the future he will be seen around the app.

If you feel he's redundant you can turn him off under Settings.

He's a program. He won't get hurt. And if he would anyway he has a kickass therapist.
Meet Tom
He’s a circle

He will help you find and utilize all features in Briteback to make sure you get the most out of your email.

This is enough to get you started. Keep an eye open for Tom cause there’s more features in Briteback that will make working life easier.

Email delivery time
Get mail when you decide!
Take control of your inbox
103+ items
a total of 1.5h

Meet Tom, he’s a circle

To help you find all of Briteback's smart functions in the future, Tom will be visible next to them.

Email delivery times
Get mail when you decide!
Take control of your inbox
1,5h
day wasted on switching between tasks and constantly checking your email. By reducing those moments to 3-6 times a day you reduce stress and elevate efficiency.
Take control over your inbox.

Calendar
Integrated and synced with whatever calendar you use.

Briteback lets learn the basics
Send email

Besides ordinary functions like these, Briteback manage has a few ways to make working life more efficient and less stressful.
Toms tips

Kalendern - vid första sidan
Ritethrough - vid compose
Deadline - vid compose
Delayed sendtime - vid compose
Settings - vid första sidan

+ läsom märke
+ viktigaste funktionerna

Bra

Thats enough to get you started.
Have a awesome day and lets get to work!

Thanks

+ Trevligt avslut + Positiv känsla

Ritethrough
Delivered without delay

Bra! tipsa om att
funktionerna finns
på detta ställe

+ Blir uppdaterad
+ för användaren

2 är inte då
nåkvändig

Ex:
Settings:
Ställ in leveranstida
ritethrough
Signature
Alias

Kalendern:
Du kan lägga in en sid
direkt från mail
eller genom att skapa
ett
Här kan man givetvis
öppna i email

#30

? blir det ongedigt?
+ Väldigt tydligt

#29

#26

#25

#27
#33

**Ställ inditt Belto**

Här ställer du in allt som rör ditt konto och dess funktion.

- Delivery times
- Rite thru

+ Totally call to action

? måste vara en bra hierarki

---

#31

We check our email

113 times per day

1.5h

This creates stress and inefficiency

Skapar häxor form av intresseväckande layout

---

#32

Tom - Settings

Här ställer du in allt som rör ditt briskback-konto.

- Delivery times
- Rite thru

---

#34

Tankar kring tutorial

- Blir lite konstigt att ha med delivery times
  Det fokuserar inte på tanken bakom
  
  EMAIL made smart
  
  Delivery times
  meeting times
  Send time
  Deadline
  
  ↓

  Instead of presenting everything here
  Use the help-system to learn how the features work

---

#35

these tips can be found tip 1/7 in settings.

- + ser möjlighet för användare att "lo" tilbaka
- + användaren ser hur många tips som finns total = kromell

---
Ska alla prickar vara synliga eller 1 åtgärd?:

|   |   
|---|---|
| alla | 1 |
| + kontroll till användaren | + Vi har kontrollen att visa vad användaren behöver veta. |
| - Många element samtidigt | ! |

Printa brillebackes design
Handriva tutor/utbildningsmaterial

<table>
<thead>
<tr>
<th>X Setting</th>
<th>X Settings Rita.thru</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivery</td>
<td>Rita.thru</td>
</tr>
</tbody>
</table>

+ Mindre info på varje sida
+ Bättre hierarki
+ Mycket bättre kor på det

Lite (mindre)

X: Here you can find

Delivery times

- 0

+ Räcka + Bättre hierarki än ->

+ Löst detalj skisser
Briteback

The communication tool that makes working life less stressful and creates room for the important things in life.

Let's explore Briteback

Beside ordinary features like the once seen here Briteback has a couple of unique features.

Show me
Email delivery time
Set the times when you want to receive emails

Take control over your mailbox

Meet Tom
The help-system
He will be visible around Brita back to highlight features that is good to know.

Next
The help-system

This will be visible around Brimbob to highlight features that is good to know. Click it to get more information about the features.

Okay!
Thank you!
That's all you need to know for now.

-väldigt trångt
-Dålig hierarki
-Ingen kommer läsa det
Delivery times
Decide at what times you want to receive emails.

Send time
Add another send time to an email if now's not the time to send it.

Deadline
With reply deadline you can ensure to get an answer before it's too late.

Meeting times
Suggest meeting times in the email, it's cleverly synced to your calendar so you can't double book.

This is Tom
He's a circle

He will be visible around Briteback to highlight features that is good to know.
Part II
Sketches for the second design proposal
En tutorial som kommer upp efter en spanska användare.

+ Låter användare köra förlåt och sen låter sig titta mer
+ Sjätte att testa

Intressant

Viktig: Highlighta funktioner som inte blivit använda

+ Underlättar för lärarna av basicfunktioner

Initierat enkelt att ta till sig men
Tom är texten mer belysande.

Av användare kan
+ se, behöver ej
+ Gärna fortsätta

alla inte är i bildform

? Kanske bara i tutorial Skapa
+ ej i Tom?

Gör en innehåll som animation från appen

Tryck på knappen

ritethru Deadline Mera

#57

swipe fra intö intö

Viktig insikt

Skapa en tidig hierarki så de som bara klickar sig igenom även får ut något,
+ Eftektiv
+ Enkelt

Delivery Ritethru

Delivery

Kanske funkar i den? Sidan att smala Nice på i pad
av försiktigt + smäktigt
+ webplats + snabb

Inte salbatt till dator
#83 # for speciella begäran

Försöka igen under tretto
Finna_len början

#88

#89

#53

knapp längs ned

#60

swipe

+snabbare

För mindre fokus

#55

Clever email

Delivery times
Rilethw
Deadline
Meeting times

+ BRA hemlik
+ Snabbare

? Ikoner måste vara byte
**#66** Döpa om Tom
ekönsneutralt namn istället
tillskriver inte Brittbäck
kvalitativa kvaliteter
eller
Zack (hebrew: "The lord recalled")

**#67** Anpassa informationen
Beroende på vilka funktioner
användaren använt villas olika
information.

**#68** Delivery times
Interaktiv länk till den
menyn

**#69** Presentation av Tom
Tryck på "hjälper dig" så
ingen missar vad han
gör!
This is Tom
your guide and helper
use him or turn him off if he
bothers you.

**#70** Tom försvinner om
användaren använt tjänsten
den rutan tipsar om

**#71** Alla prickar ligger
synliga från början

**#72** Tom försvinner om
användaren använt tjänsten
den rutan tipsar om

**#73** Minska info

**#74** Uppgrader inte information som
användaren vet

**#75** Intuitivt
- Leder bort även
om det är mer intresse
i rutan.

**#76** Förövning för Patient
**Rubrik till funktioner**

Brand new features

**Digital version av tutorial**

iPad och Smartphone

#76

**Bristeblick Swipe to begin**

Tom 01 0000 Done

et långt flöde är så kan konstant scroll saman vertikal ramosina

Folkn bli "swipe" inmedelt

+ Lidde + fenkel

+ Folkn kan enkelt hoppa över den

= delivery

X Delivery + delivery

Om användaren gift in till delivery

X Delivery + delivery

Om användaren gift in till delivery

X Delivery + delivery

Om användaren gift in till delivery

X Delivery + delivery

Om användaren gift in till delivery

X Delivery + delivery
#78

- Centrerad text
- Dålig läsbarhet
- Lite smygat
- Långsamhet
- Oändligt stockigt

#79

- Bättre läsbarhet
- Tydligare
- Ödnig och rena
Email like never before

Delivery times
Reply deadlines
Send times
Meeting times

#81

Hållöverskådligt
+Bra hierarki

+Tydligt och enkelt

Funkar på både ljus och mörkt
+Bra hierarki

kör på denna
Användartest av: Briteback

Datum: ______________________

Användartest nr: ______________________

Deltagare nr: ______________________

Deltagarinformation

Kön: ______________________

Ålder: ______________________

Yrke: ______________________

Testledare

Facilitator: ______________________

Assistent: ______________________
Experience levels

Instruktioner: Betygsätt hur erfaren du anser att du är inom följande områden. Endast en ruta per fråga får kryssas i.

1. Hur skulle du beskriva din erfarenhet av email-applikationer?
2. Hur skulle du beskriva din erfarenhet av pekskärmar?
3. Hur skulle du beskriva din erfarenhet av teknologi generellt sett?
**SYSTEM USABILITY SCALE**

**System usability Scale form**

**Instruktioner:** För var och ett av följande påståenden, markera den ruta som bäst beskriver dina reaktioner på email-applikationen.

<table>
<thead>
<tr>
<th>Påstående</th>
<th>Instämmer inte alls</th>
<th>Instämmer helt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Jag tror att jag skulle vilja använda det här system ofta.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Jag tycker systemet är onödigt komplicerat.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Jag tror att jag skulle behöva hjälp av en tekniskt kunnig person för att kunna använda det här system.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Jag tycker de olika funktionerna i det här system väl samordnade.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Jag tyckte det fanns för mycket inkonsekvens i detta system.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Jag kan tänka mig att de flesta människor skulle lära sig att använda det här system mycket fort.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Jag tyckte systemet besvärligt att använda.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Jag behövde lära mig många saker innan jag kunde komma igång med systemet.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Tasks

UPPGIFTER

1. För att undvika att bli avbruten hela tiden vill du att inkommande mail bara släpps igenom till inboxen vid vissa tider. Gör så att ny mail släpps igenom 09.00, 11.00 och 14.00.

2. Du vill göra så att mail från din chef Maria inte påverkas av dina nyss satta leveranstider av mail. Hennes mail ska komma direkt till din inkorg oavsett tidpunkt.

4. Ta bort Mappen ”Till Anna”.

5. Skapa ett mail som ska vara oberoende av leveranstiderna och skickas iväg den 23/4 kl.15.00

6. Lägg till eventet ”ledningsmöte” i kalendern den 4/5 kl. 09.00.
Appendix 3 - Semi-structured interview

Semistrukturerad intervju

Varför använde du/varför använde du inte hjälp-systemet?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Tyckte du att hjälp-systemet underlättade för dig att förstå applikationen?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Tyckte du att informationen som presenterades i hjälp-systemet var relevant?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Vad anser du om hjälp-systemets utformning?

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

Vad tyckte du var positivt med Hjälp-systemet?

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

Vad tycker du skulle kunna förbättras med Hjälp-systemet?

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________
Appendix 3 - Semi-structured interview

Semistrukturerad intervju

Varför använde du/varför använde du inte hjälp-systemet?

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Tyckte du att hjälp-systemet underlättade för dig att förstå applikationen?

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Tyckte du att informationen som presenterades i hjälp-systemet var relevant?

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
Vad anser du om hjälp-systemets utformning?

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

Vad tyckte du var positivt med Hjälp-systemet?

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

Vad tycker du skulle kunna förbättras med Hjälp-systemet?

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
APPENDIX 4 - Observations and Think aloud regarding Briteback

Data From UT1

<table>
<thead>
<tr>
<th></th>
<th>Antal testpersoner som tycker detta</th>
<th>testpersoner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Försöker klicka på mappen &quot;till Anna&quot; för att ta bort den</td>
<td>6</td>
<td>1, 2, 3, 4, 5, 6</td>
</tr>
<tr>
<td>Problem att hitta modify folders</td>
<td>5</td>
<td>1, 2, 4, 5, 6</td>
</tr>
<tr>
<td>Problem att hitta compose-vyn</td>
<td>4</td>
<td>1, 2, 4, 5</td>
</tr>
<tr>
<td>Trodde modify folder var en rubrik</td>
<td>3</td>
<td>1, 4, 6</td>
</tr>
<tr>
<td>Saknar en bekräftelse på de tider som är valda i delivery time faktiskt är sparade</td>
<td>3</td>
<td>2, 3, 4</td>
</tr>
<tr>
<td>Såg inte &quot;add&quot; i Ritethru</td>
<td>2</td>
<td>1, 6</td>
</tr>
<tr>
<td>Försöker swippea på mappen &quot;till Anna&quot; för att ta bort den</td>
<td>2</td>
<td>1, 2</td>
</tr>
<tr>
<td>Tror att Ritethru är felstavat</td>
<td>2</td>
<td>3, 5</td>
</tr>
<tr>
<td>Försöker trycka på mappen &quot;Till Anna&quot; en längre tid för att ta bort den</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Blir förvirrad för checkboxen i compose</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Missade att klicka i &quot;Ritethru inne i compose&quot;</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Såg inte &quot;Add time&quot; i delivery times</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

Data From UT2

<table>
<thead>
<tr>
<th></th>
<th>Number of participants</th>
<th>Which participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Försöker klicka på &quot;till Anna&quot; för att ta bort</td>
<td>5</td>
<td>1, 2, 3, 4, 5</td>
</tr>
<tr>
<td>Problem att ta sig från vänstermenyn till huvudfönstret</td>
<td>5</td>
<td>1, 2, 3, 4, 5</td>
</tr>
<tr>
<td>Problem att förstå ordet Ritethru</td>
<td>3</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>Problem att förstå hur vänstermenyn fungerar</td>
<td>3</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>Problem att se &quot;manage folder&quot;</td>
<td>3</td>
<td>1, 2, 4</td>
</tr>
<tr>
<td>Problem att se &quot;To&quot;</td>
<td>2</td>
<td>3, 4</td>
</tr>
<tr>
<td>Använder &quot;More&quot; för att få upp menyen istället för hamburgarmenyn</td>
<td>2</td>
<td>3, 4</td>
</tr>
<tr>
<td>Tror att &quot;Manage folders&quot; är en rubrik</td>
<td>2</td>
<td>3, 4</td>
</tr>
<tr>
<td>Vill bekräfta att tiderna har lagts till i &quot;delivery times&quot;</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Vill ha ett kryss för att stänga menyen</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Försöker Swipea på &quot;Till Anna&quot; för att ta bort mappen</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Jobbigt att ta bort en mapp</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Anser att menyen bör ligga till höger</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Saknar ett plustecken vid &quot;add time&quot;</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Har missförstått Ritethru, tror att mailen skickas direkt, inte att de tas emot</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>
APPENDIX 5 - Data from UT1

Gender

<table>
<thead>
<tr>
<th></th>
<th>Test 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Man</td>
<td>4</td>
</tr>
<tr>
<td>Kvinna</td>
<td>2</td>
</tr>
</tbody>
</table>

Age

<table>
<thead>
<tr>
<th>Deltagare</th>
<th>Ålder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>24</td>
</tr>
<tr>
<td>Test 2</td>
<td>24</td>
</tr>
<tr>
<td>Test 3</td>
<td>28</td>
</tr>
<tr>
<td>Test 4</td>
<td>50</td>
</tr>
<tr>
<td>Test 5</td>
<td>48</td>
</tr>
<tr>
<td>Test 6</td>
<td>47</td>
</tr>
<tr>
<td>Medelålder</td>
<td>36,83333333333333</td>
</tr>
<tr>
<td></td>
<td>37,5</td>
</tr>
</tbody>
</table>

Experience levels

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Test 2</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Test 3</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Test 4</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Test 5</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Test 6</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Medelvärde</td>
<td>2,83333333333333</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>
### Task success

<table>
<thead>
<tr>
<th>Task</th>
<th>Success</th>
<th>Partial success</th>
<th>Failure</th>
<th>Totalt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1</td>
<td>6</td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Task 2</td>
<td>5</td>
<td>1</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Task 3</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Task 4</td>
<td>6</td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Task 5</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Task 6</td>
<td>3</td>
<td>3</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

### Usage of Tip-feature

<table>
<thead>
<tr>
<th>Deltagare</th>
<th>Used all parts</th>
<th>Used some parts</th>
<th>Use no parts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
## SUS score

<table>
<thead>
<tr>
<th></th>
<th>TP1 - Answers</th>
<th>TP1 - Contribution</th>
<th>TP2 - Answers</th>
<th>TP2 - Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fråga 1</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Fråga 2</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Fråga 3</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Fråga 4</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Fråga 5</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Fråga 6</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Fråga 7</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Fråga 8</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Fråga 9</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Fråga 10</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Totalt</td>
<td></td>
<td>37</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>x2,5</td>
<td></td>
<td>92,5</td>
<td>80</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>TP3 - Answers</th>
<th>TP3 - Contribution</th>
<th>TP4 - Answers</th>
<th>TP4 - Contribution</th>
<th>TP5 - Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fråga 1</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Fråga 2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Fråga 3</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Fråga 4</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Fråga 5</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Fråga 6</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Fråga 7</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Fråga 8</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Fråga 9</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Fråga 10</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Totalt</td>
<td>30</td>
<td></td>
<td>31</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>75</td>
<td></td>
<td>77,5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TP5 - Contribution</td>
<td>TP6 - Answers</td>
<td>TP6 - Contribution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------</td>
<td>-------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td></td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80</td>
<td></td>
<td>75</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Observations and Think-aloud**

<table>
<thead>
<tr>
<th>Negative feedback</th>
<th>Observation (O) or Think-aloud (TA)</th>
<th>Number of participants</th>
<th>Which participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did not see the information about modify folders in the Tour</td>
<td>(O)</td>
<td>5</td>
<td>1, 2, 4, 5, 6</td>
</tr>
<tr>
<td>Did not see the information about sending emails in the tour</td>
<td>(O)</td>
<td>4</td>
<td>1, 2, 4, 5</td>
</tr>
<tr>
<td>Thinks that the headlines in Tom is interactive and is connected with each menu</td>
<td>(TA)</td>
<td>2</td>
<td>1, 5</td>
</tr>
<tr>
<td>Experiences problems with closing Toms information box</td>
<td>(O)</td>
<td>2</td>
<td>4, 5</td>
</tr>
<tr>
<td>Does not assimilate the information in the help system</td>
<td>(O)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>It takes a large amount of time before the user understands what Toms’ purpose is</td>
<td>(O)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Perceives Tom as confusing</td>
<td>(TA)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Does not understand why Tom only is visibel at certain features</td>
<td>(TA)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>but did no assimilate the information in the Tip-feature</td>
<td>(O)</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Positive feedback</th>
<th>Observation (O) or Think-aloud (TA)</th>
<th>Number of participants</th>
<th>Which participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>The first impression of Tom is positive</td>
<td>(TA)</td>
<td>4</td>
<td>1, 2, 4, 5</td>
</tr>
<tr>
<td>Assimilates’ the information in the help system</td>
<td>(O)</td>
<td>2</td>
<td>1, 4</td>
</tr>
<tr>
<td>Tries to use Tom when the user does not know what to do</td>
<td>(O)</td>
<td>2</td>
<td>3, 5</td>
</tr>
<tr>
<td>Mentions the Tip-feature by name (Tom)</td>
<td>(TA)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Expresses curiosity about what Tom would say about a specific feature</td>
<td>(TA)</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
### Semi-structured interview - Answers

<table>
<thead>
<tr>
<th>Negative feedback</th>
<th>Number of participants</th>
<th>Which participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prefers to use a Trial-and-error attitude</td>
<td>4</td>
<td>1, 2, 3, 5</td>
</tr>
<tr>
<td>Want to be able to restart/watch the information in Tom again at a later time</td>
<td>2</td>
<td>1, 2</td>
</tr>
<tr>
<td>Normally don’t use Help systems</td>
<td>2</td>
<td>2, 3</td>
</tr>
<tr>
<td>Normally does not read instructions</td>
<td>2</td>
<td>2, 3</td>
</tr>
<tr>
<td>Want Tom to be present in more places in the application</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Wants’ to be able to turn Tom off</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>To much text in the Tour</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Wants to try the application on their own and then watch some sort of introduction</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Wants more images in the Tour</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Wants the Tip-feature to present more basic functions</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Wants the Tip-feature to only present functions that is unique with the application in comparision to similiar applications.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Experiences the Tip-feature as annoying</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Prefers a regular help meny instead of Tom</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Didn’t understand that the user had to interact directly with Tom to see the information.</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Does not like to be forced to do specific steps to find out what can be done in the application.</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Did not see Tom</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Did not understand what Tom did until the end</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Would have wanted a clearer discription of Toms function</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Positive feedback</th>
<th>Number of participants</th>
<th>Which participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>The information in Tom was relevant</td>
<td>4</td>
<td>1, 3, 4, 5</td>
</tr>
<tr>
<td>Likes the design of Tom</td>
<td>4</td>
<td>1, 3, 4, 5</td>
</tr>
<tr>
<td>Likes the way that information and features are presented with Tom</td>
<td>3</td>
<td>1, 2, 4</td>
</tr>
<tr>
<td>Likes that Tom appears during the using of the application</td>
<td>3</td>
<td>1, 4, 5</td>
</tr>
<tr>
<td>Short and relevant information in Tom</td>
<td>2</td>
<td>1, 5</td>
</tr>
<tr>
<td>Became curious about Tom</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Thinks that Tom fits a Trial-and-error attitude</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Prefers Tom instead of an regular help menu</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>
APPENDIX 6 - Data from UT2

Gender

<table>
<thead>
<tr>
<th></th>
<th>Test 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Man</td>
<td>4</td>
</tr>
<tr>
<td>Kvinna</td>
<td>1</td>
</tr>
</tbody>
</table>

Age

<table>
<thead>
<tr>
<th>Deltagare</th>
<th>Ålder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>25</td>
</tr>
<tr>
<td>Test 2</td>
<td>28</td>
</tr>
<tr>
<td>Test 3</td>
<td>22</td>
</tr>
<tr>
<td>Test 4</td>
<td>27</td>
</tr>
<tr>
<td>Test 5</td>
<td>23</td>
</tr>
<tr>
<td>Medelålder</td>
<td>25</td>
</tr>
<tr>
<td>Median</td>
<td>25</td>
</tr>
</tbody>
</table>

Experience levels

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Test 2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Test 3</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Test 4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Test 5</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Medelvärde</td>
<td>2,4</td>
<td>2</td>
<td>2,4</td>
</tr>
</tbody>
</table>


## Task success

<table>
<thead>
<tr>
<th>Uppgift</th>
<th>Success</th>
<th>Partial success</th>
<th>Failure</th>
<th>Totalt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uppgift 1</td>
<td>5</td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Uppgift 2</td>
<td>4</td>
<td></td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Uppgift 3</td>
<td>3</td>
<td>2</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Uppgift 4</td>
<td>5</td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Uppgift 5</td>
<td>2</td>
<td>3</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Uppgift 6</td>
<td>5</td>
<td></td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>

## Usage of Tip-feature

<table>
<thead>
<tr>
<th>Användes Tom?</th>
<th>Ja, alla delar</th>
<th>Delvis</th>
<th>Nej</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deltagare 1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Deltagare 2</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Deltagare 3</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Deltagare 4</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Deltagare 5</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Totalt</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>
### SUS score

<table>
<thead>
<tr>
<th>Fråga 1</th>
<th>TP1 - Answers</th>
<th>TP1 - Contribution</th>
<th>TP2 - Answers</th>
<th>TP2 - Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td><strong>Totalt</strong></td>
<td>31</td>
<td>25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| x2,5 | 77,5 | 62,5 |

<table>
<thead>
<tr>
<th>Fråga 6</th>
<th>TP3 - Answers</th>
<th>TP3 - Contribution</th>
<th>TP4 - Answers</th>
<th>TP4 - Contribution</th>
<th>TP5 - Answers</th>
<th>TP5 - Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>35</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 60      | 87,5          | 80                 |               |                    |               |                    |
Observations and Think-aloud

<table>
<thead>
<tr>
<th>Negative feedback</th>
<th>Observation (O) or Think-aloud (TA)</th>
<th>Number of participants</th>
<th>Which participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doesn’t use Zach voluntary</td>
<td>(O)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Tries to use the headlines in Zach as buttons</td>
<td>(O)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Thought that the tips from Zach (Settings) came from the yellow dot that is still visible after viewing it</td>
<td>(TA)</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Positive feedback</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understands what the application does after finishing the Tour</td>
<td>(O)</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Semi-structured interview - Answers

<table>
<thead>
<tr>
<th>Negative feedback</th>
<th>Number of participants</th>
<th>Which participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Didn’t understand that “big zach” in the tour was the same as the ”small Zachs” in the Tip-feature</td>
<td>3</td>
<td>2, 4, 5</td>
</tr>
<tr>
<td>trouble with understanding Zachs’ purpose</td>
<td>3</td>
<td>3, 4, 5</td>
</tr>
<tr>
<td>Wants’ to start using the application right away</td>
<td>2</td>
<td>1, 3</td>
</tr>
<tr>
<td>Normally dosen’t read instructions/help-systems</td>
<td>2</td>
<td>1, 5</td>
</tr>
<tr>
<td>Would have wanted to be able to interact with the information in the Tour to get more information</td>
<td>2</td>
<td>2, 5</td>
</tr>
<tr>
<td>Didn’t understand that Zach was interactive</td>
<td>2</td>
<td>4, 5</td>
</tr>
<tr>
<td>Wants’ to be able to turn Zach off</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Didnät need Zach to understand the features it highlighted</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Wanted to have to click on Zach in the beginning to understand how it worked</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Wants to be able to restart Zach</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Wants more information in the Tour</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Positive feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was not bothered by Zach</td>
<td>5</td>
<td>1, 2, 3, 4, 5</td>
</tr>
<tr>
<td>Likes a help system that is design in this manner</td>
<td>4</td>
<td>1, 2, 3, 4</td>
</tr>
</tbody>
</table>
På svenska

Detta dokument hålls tillgängligt på Internet – eller dess framtida ersättare – under en längre tid från publiceringsdatum under förutsättning att inga extraordinära omständigheter uppstår.

Tillgång till dokumentet innebär tillstånd för var och en att läsa, ladda ner, skriva ut enstaka kopior för enskilt bruk och att använda det oförändrat för ickekommersiell forskning och för undervisning. Överföring av upphovsrätten vid en senare tidpunkt kan inte upphäva detta tillstånd. All annan användning av dokumentet kräver upphovsmannens medgivande. För att garantera äktheten, säkerheten och tillgängligheten finns det lösningar av teknisk och administrativ art.

Upphovsmannens ideella rätt innefattar rätt att bli nämnd som upphovsman i den omfattning som god sed kräver vid användning av dokumentet på ovan beskrivna sätt samt skydd mot att dokumentet ändras eller presenteras i sådan form eller i sådant sammanhang som är kränkande för upphovsmannens litterära eller konstnärliga anseende eller egenart.

För ytterligare information om Linköping University Electronic Press se förlagets hemsida http://www.ep.liu.se/

In English

The publishers will keep this document online on the Internet - or its possible replacement - for a considerable time from the date of publication barring exceptional circumstances.

The online availability of the document implies a permanent permission for anyone to read, to download, to print out single copies for your own use and to use it unchanged for any non-commercial research and educational purpose. Subsequent transfers of copyright cannot revoke this permission. All other uses of the document are conditional on the consent of the copyright owner. The publisher has taken technical and administrative measures to assure authenticity, security and accessibility.

According to intellectual property law the author has the right to be mentioned when his/her work is accessed as described above and to be protected against infringement.

For additional information about the Linköping University Electronic Press and its procedures for publication and for assurance of document integrity, please refer to its WWW home page: http://www.ep.liu.se/

© [Johan Linder]