



JÖNKÖPING UNIVERSITY
School of Engineering

A Qualitative User Experience Study on Integrated Application Preferences in Social Media

Focusing on two different target groups of Facebook users

PAPER WITHIN Informatics, Product Design, UX/UI, Social Media

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Abstract

This study examines User Experience on in-app Facebook features. Facebook is the SNS with the most users worldwide and is well known for its ability to connect people to one another. Using data from interviews and a usability test on two target groups of different ages, we determine if there is a difference in user preferences and opinions on the Facebook mobile application. This study's goal is to help further development of social network services and overall user experience in social media in the future.

Summary

In this study my purpose is to is to examine how Facebook's interface design has impacted the user experiences relating to functionality and social connection. The aim of the study is to examine the research and design of the Facebook mobile application, as well as the user's preferences on integrated applications. I would like to determine if or why users pick one feature over the other; two different target groups will be studied based on their age, this is to examine if there is a generational difference in their experiences or not. The focus will be on the mobile application specifically because it is the most easily accessible option for day-to-day use for Facebook users.

1.2.3 RQ1: Which specific Facebook Integrated Application features do users prefer to interact with and why?

1.2.4 RQ2: Will the results from the study show a difference in UX between the two target groups?

The research method includes interviews and usability tests on 10 total participants. They were implemented remotely over video calls and led to significant findings that demonstrated both similarities and differences between the two target groups. Findings included that the participants used the app for social connections and gathering information. They found the application easy to use even though the information was overwhelming at times. When rating the integrated applications, they used most in the application, Feeds and Groups were the most popular. By analyzing the data, we were able to see that the majority of the time the two groups had cohesive responses, besides a few questions such as the one in Figure 3.

Keywords

User Experience, Usability, Social Media, Application, Interaction, Facebook, Research Questions

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1 Introduction

Social Network Services (SNS) have generated a great interest in people communicating and sharing their lives on the internet. Interacting with these social applications has become an integral part of our daily activities, even though it might vary from generation to generation. Digital interactions have now transcended past physical ones due to the accessible cell phones we carry everywhere. Social media usage is one of the most popular online activities globally. In 2020, over 3.6 billion people used social media worldwide, a number projected to increase to almost 4.41 billion in 2025 (Statista, 2022). This shows how drastically the spread of information has developed in the last couple of decades. This also means that people connect differently to one another than we did before any SNS existed. Millions of users are participating by consuming and producing multimedia content shared on these generally free applications, as well as joining or forming communities over multiple different platforms. An SNS includes user-generated content such as photos, videos, and posts to inform other users.

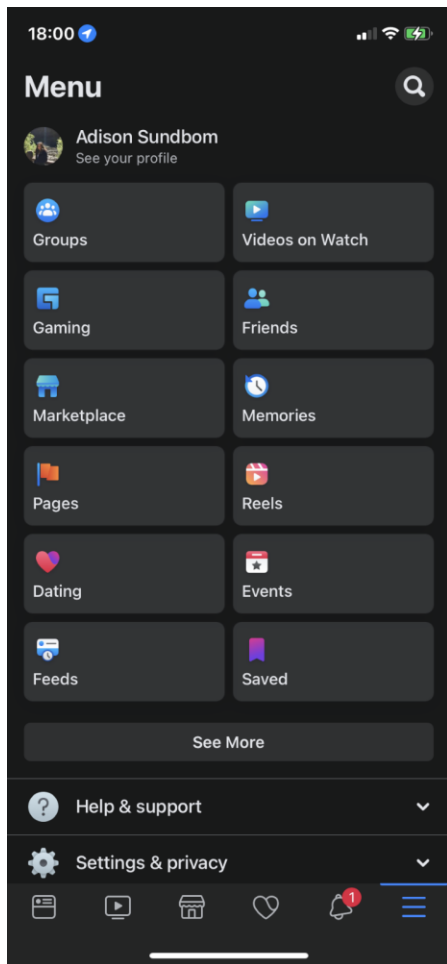
But why do the majority of people have more than one social media account? In 2020, a study showed that the average number of social media accounts was 8.4 per person, which is a number that had increased 75% since 2014. (Dean, 2021) If Facebook, Twitter, and Instagram all have similar functions, then what is the benefit for users to have an account for each? This is because they all cater to different audiences, and even though they might have similar functions, each social media app has an underlying demographic or purpose that differs from other platforms. For example, Facebook is known as a social platform to share posts with images, videos, or news, LinkedIn is for professional connections and differing industry articles, and YouTube is for longer videos such as tutorials, sports, or anything else someone would want to document and share. Because there are so many options, people might find interesting content on each, whether it is to connect with old friends, learn something new, or simply to pass time.

This study aims to examine the User Experience (UX) design of social media, specifically Facebook, and how it affects user interaction on the platform. This study is relevant to informatics research in that it will observe and review what motivates and controls users through their UX journey on social media platforms - even though it specifically focuses on one. There has been a significant amount of research done on Facebook and how users interact with the application. This research has spanned across numerous topics relating to personality correlating to Facebook use (Hall, 2020), determinants of the Facebook application discussing gaming and social interaction (Lai, C.-Y., & Yang, H.-L., 2016), and how people interact with the application to manage or increase social capital (Lee, Kim, Y. J., & Ahn, J., 2014). Dhyab, & Varol, A. (2018) focused specifically on using mobile devices for distance education through the Facebook application, which researched the challenges of practical education. Even though so much research has been done on the general topic of Facebook, I was unable to find research on the specific group of features I chose to focus on. Many articles, journals, and

research projects have prioritized a specific kind of feature; gaming, messaging, notifications, timeline etc. Other studies have also not necessarily focused on two specific age groups, a specific generation, but not comparing two different ones with what my background research has found.

It will be a study of mobile applications to demonstrate the distinctive design and research methods that led to developing this social media application. Some focus areas will be the variety of social features available to the user within the application; how users connect with friends, family, or even strangers through the information presented. The focus will be to narrow down the purpose of certain features within this social media application, and how UX research has led to the design purposes behind it. Specific Facebook features that I will be focusing on in the study are ones that allow user connections. This will also include ones that might have content the user is specifically interested in. The Integrated Application pages include the following: Main Feed, Marketplace, Groups, Videos on Watch, Dating, Gaming. I have selected these as the focus to see which ones the participants use most when they have the equal choice of using all if desired. Some of these features have been around longer than others, but that may not mean they are used more. During the research method I will focus more on the Groups feature to test usability and overall user knowledge and interest. Usability is the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency, and satisfaction in a specified context of use. (Rana, 2010)

The following is an image to show the features as displayed on the mobile application under the menu option.



1.1 Background

The research behind UX is detailed and has had a significant impact on society, specifically with social media applications seeking social connection or interaction. I am interested in the thought processes behind these platforms, how people interact with them, and how it affects their communication with their family or friends to follow the digital and real world. UX research is very thorough in identifying the target audience of the product, whether it be an application, a website, or a software. UX's four key axes are Needs, Expectations, Attributes, and Capabilities (Joo, 2017) which in this case will be based on social media applications. The user-centered process that is so widely used, determines the goals, and needs of the users by using personas and archetypes. Personas are used to identify your ideal target user or customer while archetypes are more behavioral perspectives from user groups. By analyzing this research data, I will be able to determine differences between the goals of each application.

Facebook is a social media platform that was created in February 2004 by Mark Zuckerberg, who was a student at Harvard University. According to Zuckerberg, "The idea for the website was motivated by a social need at Harvard to be able to identify people in other residential

houses” (Steinfeld, 2008). This simple idea Zuckerberg had has now developed into an application that has continuous worldwide impact on society along with other SNS. In general, UX research and design has had such a strong influence on the world, and more specifically how people have connected over social media and the internet. Facebook is strategically designed for the users to connect with their family and close friends, to stay connected with acquaintances, and to develop connections with new people (E.Lee, Y.Kim, and J.Ahn, 2014).

SNS have had the most influence on the generations that grew up with them, affecting their self-esteem, social interactions, attention span etc. While conducting user research behind Facebook and social media applications, it was generalized that older generations had all their childhood and their young adult life without any of it, so it is less of an influence on them now that they are older compared to younger generations. It has been determined that the period between the ages 18 and 25 is a phase of “emerging adulthood,” a liminal period between adolescence and adulthood (Arnett, 2000). To ascertain the most fit persona to use for the study, I was able to find that more research on the role of social network sites among young adults is needed (Steinfeld, 2008), since maintaining friendships through SNSs (Social Network Services) like Facebook may play a key role to that age group than any older generations could.

While analyzing the user background of Facebook, it was made clear that not only are young adults using this platform to stay connected with each other, there is another prominent age group using it as well. A study was done in 2018 in which they found that 52 percent of people ages 50 to 64 have Facebook pages (Kiger, 2018). I found this to be intriguing because this age group already consisted of adults by the time Facebook was released and they were just starting to understand the advancing technology in general. They already had developed relationships before social media, which is why it is interesting how those connections have or have not transferred over to the Facebook platform.

1.1.1 Persona 1

This persona will represent target group 1, which is based on a younger generation of SNS users.

Harper Jones

Persona 1

Harper is a young adult who is trying to get settled in life after recently graduating college. She highly values relationships with friends and family. In her down time after working from home, she enjoys spending time on social media or watching TV to relax.

BACKGROUND/ DEMOGRAPHICS

- 20-25 years old
- Post Bachelors Graduate
- Works as a Marketing associate
- Studied Marketing and Communications
- Single
- Enjoys the outdoors, yoga, podcasts, spending time with friends
- Goes out for drinks 2-3 times a week with friends

GOALS/ CHALLENGES

- Maintain Social Life
- Keep up with family and other connections
- Gain work experience through her job
- Apartment searching
- Buy furniture

She would like to progress her day-to-day life in productive ways while also being able to have fun and unwind

TECHNOLOGY/SOCIAL MEDIA

- Instagram
- Twitter
- Snapchat
- Facebook
- LinkedIn
- YouTube

She is very proficient and active on most social media applications, and goes on them at least once a day

Online Behavior

Harper switches around from one social media application to another, the reasoning for her is that each one serves a different purpose.

Different purposes may be for entertainment, learning or searching for new information, connecting with friends, job or mentor connections, or simply to mindlessly scroll through different content.

Content may be inspiration for fashion or trends, news or politics, humor, videos, or pop culture articles/podcasts.

Personality Traits

- Outgoing
- Social
- Creative
- Ambitious
- Easy-going
- Perceiving
- Active

1.1.2 Persona 2

This persona will represent target group 2, which is based on an older generation of SNS users.

Oliver Jacobs

Persona 2

Oliver is a middle-aged man who works 9-5 at an office each day. He is quite settled in life and generally knows what he wants. He enjoys taking time for himself to workout and watch or play sports, as well as spending quality time with his family.

BACKGROUND/ DEMOGRAPHICS

- 50-55 years old
- Works at a Tech Company
- Studied International Relations
- Married with 2 children, 12 and 15 years old
- Owens two dogs
- Enjoys golf, spending time with family, hiking with dogs, and working out
- Joined a work bowling team

GOALS/ CHALLENGES

- Spend time with family
- Keep up relationships with friends
- Work towards a promotion at work
- House remodel
- Be in good health

He would like to maintain relationships and connections while also taking the time for himself and his family

TECHNOLOGY/SOCIAL MEDIA

- Facebook
- Twitter
- Instagram
- LinkedIn

He occasionally uses social media and is generally a passive user that can access and control the apps as much as he needs to.

Online Behavior

Oliver doesn't use social media very often, but when he does, he is very efficient and is only on it for a limited amount of time.

Different purposes may be for job connections, sharing or searching for information, observing posts from friends and family.

Content may be inspiration interior or exterior home design, news or politics, humor, videos, or sports content.

Personality Traits

- Reserved
- Friendly
- Confident
- Ambitious
- Observing
- Decisive

1.2 Purpose and research questions

My aim of the study is to examine the research and design of the Facebook mobile application, as well as the user's preferences on integrated applications. The purpose is to examine how Facebook's interface design has impacted the user experiences relating to functionality and social connection. Interface is referring to the overall style or look of the graphical application. This is where UX research and UI design comes in and designers will create a platform that is hopefully easy to use and catered to the user. I would like to determine if or why users pick one feature over the other, and if they are designed based on different user age groups, or simply different target groups. Two different target groups will be studied based on their age, this is to examine if there is a generational difference in their experiences or not. The focus will be on the mobile application specifically because it is the most easily accessible option for day-to-day use for Facebook users. Users can access it from their mobile/cell phone from anywhere. The mobile aspect is an important focus because present day communication is based heavily on instant replies, posts, or shares. The interface design on the mobile application is slightly different from the desktop interface. It is far more compact and does not display all the available features easily on one screen as the desktop design does. Even though usability would be easier on the desktop application because the user is able to see everything at once, it does not qualify as better for the specified lifestyle and habits for this study.

There have been studies that have analyzed user interaction and preference with the features on Facebook, such as likes, comments, shares etc. (Ryan & Xenos, 2011) However, there seems to be a research gap with these studies in relation to UX design. The goal with these following hypotheses is to prove or not prove that even though many social media applications have adapted similar UX features, there is still a considerable difference in the purpose of each platform and their specific audiences. Facebook is the market leader of social networks worldwide (Statista, 2022), which is why it will be a relevant focus for this study. I will compare the integrated applications on the social media platform, which will allow me to analyze the way users are able to interact and connect to others. By exploring different user perspectives on social media, I hope to understand the users of these social media platforms, as well as how their goals and needs connect to their user experience.

1.2.3 RQ1

Which specific Facebook Integrated Application features do users prefer to interact with and why?

1.2.4 RQ2

Will the results from the study show a difference in UX between the two target groups?

The research questions above are relevant to the study because they have intentions to resolve the research gap data. By discovering which features are more used or interacted with, this could help current or future SNS designers determine which in-app features are favored by the user. It could also provide beneficial data regarding the age group preferences and if they differ. Because of other user data studies, we are aware that both age groups use and interact with the application, but it is important to determine how similar or different the target groups use habits are.

1.3 Delimitations

This study will not be focusing on other social media applications because I have found that Facebook was the first social media available to the public and has the most users worldwide, which makes it the more relevant platform for this study. And even though it has faced controversy over data privacy laws and political interference in the previous years, those factors will not be included or focused on in this study. Since it is a bachelor's thesis, I have decided to be more specific in the focus, however these issues and topics can be further analyzed in future studies on Facebook. Based on background research, the topic of data privacy has also been covered quite a bit and is not necessarily a research gap on the topic.

When selecting the features mentioned in the introduction, I took into consideration focusing on interaction features as well, such as: Likes, Comments, and Shares. However, through research I found that there has already been a study done on those by Ryan & Xenos, 2011, where they had research participants rate their Preference of Facebook Feature Use and it was measured on a seven-point Likert-type scale (1 = “Dislike a great deal”, 4 = “Neutral”, and 7 = “Like a great deal”) by asking the respondents to indicate the extent to which they like using each of the following Facebook features: (1) Status, (2) Wall, (3) Comment, (4) News Feed, (5) Like, (6) Message, (7) Photo, (8) Chat, (9) Group, (10) Game, (11) Fan Page, (12) Event, (13) Note, and (14) Friend (Ryan & Xenos, 2011). That is where I found a research gap on the features I selected for this study. From my research I was not able to find a study on Main Feed, Marketplace, Groups, Videos on Watch, Dating, and gaming specifically. Nor a study done on the usability of Facebook groups with the two selected personas.

The specific focus on the personas and age groups has not included the younger teens because studies show they are more prominent on other social media applications such as Instagram, Snapchat, or Twitter. And the age group in between (30-49) will not be included because 65 percent have Facebook pages (Kiger, 2018), the highest percentage of users out of each age group. This somewhat “millennial” age group has had experience in using Facebook and skills in technology for a moderate amount of time, while the groups I am focusing on have a more varied skill set and life experience. Even though including that middle age group would provide more insight to the UX and usability of the integrated application features, it could be included in an extended version of the study in the future.

1.4 Outline

The structure of this report is organized in the sense that the reader may have full understanding of the topic and background of the study before they are able to go through the purpose and research questions. Then the theoretical background will help support the facts and reasoning behind the study. By having access to all this information and explanation, the report then continues into the research methods which explain how the research will be conducted and supported on other research. Then the ultimate findings, and analysis will follow explaining the data that was collected. The conclusion section will further analyze the data and summarize the study's results based on all previously mentioned information.

2 Theoretical background

2.1 User Connection and Facebook

It is known that some social media services have similar functions and uses, they all differentiate in some way. A comparative analysis was done on Twitter, Facebook, and Kakao Story; a social media platform that was launched in South Korea. Kakao Story is unique because unlike Facebook, the user is not able to alter their profile except for pictures. It was proven that this difference meant that it was difficult for users to connect with other users, whether it is creating a relationship or expressing their identity. This data will help support my study because it explores the differences between the applications, and why certain features are preferable to certain users, ex. the profile options (S. Hong and J. Oh, 2012).

For a user to have access to all that Facebook has to offer, they must first create a profile. There are many pieces of personal information that can be added to a profile. These attributes include the name of the person, location, contact information, details of education and work, birth date, relationship status, family members, etc. Because this can all be sensitive information, Facebook has privacy settings. This conference paper has analyzed the privacy and personal information disclosure of Facebook users, as well as briefly compared it with Twitter's profile settings. Even though it does emphasize information security, it also provides insight to the details behind this social media's platform profiles. The study results concluded that few users were aware of how to use Facebook privacy controls. (S. I. Bhat, T. Arif, M. B. Malik, and A. Ahmad Sheikh, 2020) When it comes to the UX research behind the application, from Meta's website (the company behind Facebook) they state that UX researchers at Facebook seek to deeply understand and improve the experiences of the over 2.4 billion people around the world who use Facebook every month (Meta, 2020).

2.2 Social Network Services

A social networking service (SNS) is an online vehicle for creating relationships with other people who share an interest, background, or real relationship (Kenton, 2022). The term Social

Network Service is also frequently used as another term for social media. Present day there are so many options for SNS, that 75% of all Americans have at least one, and this is yet another reason each SNS tends to slightly differ depending on the target audience. Successful specialized SNS include YouTube, Instagram, Facebook, Twitter, LinkedIn, Reddit, Snapchat, Tumblr, Pinterest, and TikTok (MU, 2022). They are free and connect people all over the world. These applications are where people can share user generated content, such as photos, videos, and other content related to their interests or other information.

Users can access SNS from any device nowadays, however mobile devices such as cell phones and tablets have significantly increased the amount of growth of these applications (Kenton, 2022). Early on when SNS emerged, they were known as egocentric-networks and were focused on the people using them and not their interests, now it is focused more on the user's interests. This can be seen on every SNS through algorithms, advertisements, and suggestion pages. Social media has become a business, and instead of focusing on the user and what they would benefit from, the people behind the application are now more than ever focused on profits. However, many users seem to disregard or ignore those facts.

There are four main characteristics of SNS as stated in a previous study, they are as follows: Persistence, Replicability, Searchability, and Invisible Audiences (Medaglia, 2009). These characteristics reflect the diverse ways users can connect to one another, interpret, and interact with data, and ways they are able to present and express themselves. These points are still relevant even today because we still have access to similar features as there was then, we just have more now that provide more choice for the user. When it comes to Facebook as an SNS the infrastructure is developed and maintained by the owners but the content, like pictures, games, and links, are uploaded and maintained by the users (Medaglia, 2009). This means the users have full control over what they share. And over the years Facebook developers have continuously updated the application and added more features. Users are encouraged to further develop their relationships and connections on the SNS by emphasizing friendships to the users to make it feel more private and intimate of a platform.

2.3 User Experience

A paper was done from a Meta (Facebook) conference on the topic of Human Computer Interaction and UX. The focus was on newcomers to the Facebook application and how they interact with online communities. The paper examined the relationship between initial user behavior and content production in a social network environment (Burke, M., 2009). The source is the most recent UX study on the application that I could find from Meta. It states that users contribute to different social systems within the application; personal posts, discussion groups, and the interactions involved from or to the users. According to Burke, the success of the system is tied to the amount of contribution any one member's social contacts have produced, an outcome that is dependent on the eventual participation of a large portion of the user base. The three distinct categories that structure the application are social learning,

feedback, and distribution. These categories were tested based on semi-structured interviews of Facebook users and newcomers. Overall, the results concluded that the newcomers were adapting to how much their friends had posted and interacted on the application. “The experience that users of social networking sites have is primarily a function of the content their friends contribute” (Burke, M., 2009). The focus of this study did not focus on any specific features of the application, which is why the data will help provide an understanding behind the user's purpose of continuously using the application and what controls the frequency of their posts and interactions based on social influences.

2.4 Comparison and Age Differences

When researching previous studies, I came across a study by Jung (2018) where they researched the difference between how younger adults and older adults use Facebook. Their study investigated the level of satisfaction of users when using Facebook. Jung felt that there was a research gap in this area of the SNS field and conducted an online survey using 679 Facebook users. The results of this survey were quite interesting and showed that there is a significant difference between the two age groups in terms of the activities and purposes of which they use the application. Jung stated that the data analysis reveals that age makes a significant difference in Facebook activities and levels of satisfaction with using Facebook (Jung, 2018).

Another study that related to my research focus was by Quan-Haase and Young (2010). Their purpose was to discover why people are intrigued or convinced to use multiple forms of communication instead of just one or a few. Their goal was to understand the needs of the users and what media fulfills those needs. By comparing Facebook and instant messaging, they created a study based on 77 surveys and 21 interviews to hopefully draw conclusions that explain how different SNS satisfy user needs. “A factor analysis of gratifications obtained from Facebook revealed six key dimensions: pastime, affection, fashion, share problems, sociability, and social information” (Quan-Haase, Young, 2010). Through comparative analysis, these dimensions showed that instant messaging had the purpose of relationship maintenance through communication, while Facebook was rated as the fun app to stay in touch with one's social network. The gratification behind SNS such as Facebook and basic Instant Messaging differ due to the users' social needs and general networking behavior; this also explains how people are led to using multiple different SNS that can accommodate different social interactions.

2.5 User Behavior and Social Capital

Cross-network sharing is very standard for modern day social media users. Even more interesting, is how users' behavior changes from platform to platform. At the time, no one else had analyzed or investigated cross-sharing, but this study focused on exploratory user-centric research with a large sample of participants that linked their profiles on multiple social media platforms; Flickr, Google+, Instagram, Tumblr, Twitter, and YouTube. The

observations on the multi-network analysis showed strong data on how users behavior changes when using Facebook which will help support my study. (B. H. Lim, 2015)

Social capital is the networks of relationships among people in society, and in this case, how those relationships are affected when connected online. It was found that there were positive and negative ways users could impact their capital, for example, the frequent use of Like was positively associated with bonding social capital. The frequent use of Comment was negatively associated with bonding social capital (Eunsun, 2014). Bonding and bridging are two terms which refer to different things within social capital. Bonding is within a specific group or community, while bridging is between separate social groups and is based on class, race, religion etc. (Claridge. T, 2021). A study was done on social capital regarding college students and their use of Facebook. In 2009 it was the most popular SNS among college students and they wanted to find the difference between the intensity of Facebook use and students' life satisfaction, social trust, civic engagement, and political participation (Sebastián V., 2009). They concluded that the use of Facebook had a small impact on social capital at the time, specifically because it would alienate these university students from the “real world,” meaning they became quite shallow and were not involved in civic engagement, politics, world news etc.

3 Method and implementation

The following research thesis will be a qualitative study on how users have been affected by UX regarding the Facebook application. Qualitative research methods were designed, mostly by educational researchers and other social scientists (Taylor and Bogdan, 1984), to study the complexities of humans (e.g., motivation, communication, understanding) (Seaman C.B., 2008). After determining the goals behind the developer's design for this social media application, I will begin to ask how this has resulted in the users interacting in certain ways. Facebook has 2.91 billion monthly active users worldwide (Statista, 2022). It is one of the most well-known social networks worldwide and is projected to continue increasing in users.

To develop solid and interesting research questions, then use those questions to analyze and organize data from other academic research papers. The research will focus on information related or similar to Facebook, as well as its UX design development. The key prerequisite for experience-driven design is to define what experience to design for; UX goals concretize the intended experience (Eija Kaasinen etc., 2015). The data collection can be expanded by exploring other social media related research that may not specifically pertain to the two focus applications, but similar ones such as Instagram, Twitter, Reddit, Snapchat etc. Reviewing wireframes and research data behind the development of the application, both through existing research and personal observation, will help analyze the facts of these research questions and come to a summative assessment. Using the data collected, I will conduct qualitative interviews, followed by a usability test. The UX interface is also affected by the

usability of the system, contents, and services, the user's affinity, and the user's value (Joo, 2017) which is why this test will be valuable in collecting qualitative results.

I will conduct semi-structured interviews with 10 participants, 5 from each target group who use Facebook; these target groups will be based on the personas in section 1.1.1, 1.1.2. This will allow me to collect qualitative data by using prepared questions which follow the research guidelines, while also allowing the interview to be flexible for the participants' answers. The standardized open-ended interview will reduce interviewer effects and bias when several interviewers are used (Patton, 2002). Some authors advocate for using mixed methods for survey research when no one method is adequate to address the planned research aims, to reduce the potential for measurement and non-response error, and to better tailor the study methods to the intended sample (Dillman et al., 2014; Singleton & Straits, 2009). The questions in the interviews will be based Patton's qualitative research and evaluation methods, as well as initial research and the theoretical background.

The six types of questions based on Patton's (2002) research methods:

- Behavior or experience.
- Opinion or belief.
- Feelings.
- Knowledge.
- Sensory.
- Background or demographic.

These six areas will allow the interviews to gather information on the users' experience and perception of the application. Then finally, by organizing and using the data from interviews, I will conduct a brief UX usability test. All interviews and UX usability tests will be conducted over zoom with the participants all being in the US; specifically, Oregon (OR) and Colorado (CO) for ease of selection to ensure they have the right qualities for the study.

A usability test consists of having test users exercise a product and think aloud about their experience using it, while an evaluator observes the users and listens in on their thoughts (Hertzum, 2020). While some usability tests focus simply on the functionality and flow of the interface, this test will examine the users as they navigate through areas of the application to observe their experience with the information in front of them. The reason for doing the Usability test on the group feature only is to observe their experiences as users on a feature that does not quite exist on other SNS. Other SNS have diverse ways of connecting users, but after using and observing those apps, there does not seem to be a similar integrated app such as the group feature on Facebook. This testing will also provide some insight into future design improvement regarding social media applications, whether there are positives or negatives in the findings.

4 Findings and analysis

4.1 Interview

The Interviews and Usability tests consisted of 10 total participants. Representative sampling was conducted when choosing the participants for the study, this was to ensure that it was a probability sample that could provide a contextualized perspective and understanding of the user's purpose in connection to the goal of the study. A representative sample is one that ensures external validity in relationship to the population of interest the sample is meant to represent (Lavrakas, 2008), which in this case is the two target groups based on the personas. Five participants were Facebook users between the ages of 20-25 and matched the qualities of user persona 1 (1.1.1), which is named target group one. The other five were done on Facebook users between the ages of 50-55 and matched the qualities of user persona 2 (1.1.2), named target group two. The qualities taken into consideration when selecting the participants were: age, SNS and Facebook usage, lifestyle, education, and career. The list of participants and details regarding their gender, age, location, occupation, and education are shown in Figure 1. Participant numbers beginning with a number one, represent target group one, and Participant numbers beginning with a number two, represent target group two. The following figure will depict the demographics of the people who are participating in the study.

Participant Number	Gender	Age	Location	Occupation	Highest Education
1a	Male	21	Hillsboro, OR	Welder	Trade School
1b	Female	22	Portland, OR	Marketing Associate	Bachelors Degree
1c	Female	22	Portland, OR	Barista	Associates Degree
1d	Female	23	Portland, OR	Clinical Research Assistant	Bachelors Degree
1e	Male	22	Bend, OR	Ski Lift Operator	Bachelors Degree
2a	Female	50	Portland, OR	Head of Marketing	Bachelors Degree
2b	Male	53	Portland, OR	Quality Manager	Associates Degree
2c	Female	50	West Linn, OR	Volunteer	Bachelors Degree
2d	Male	54	Boulder, CO	Founder of Consulting Company	Masters Degree
2e	Female	50	Boulder, CO	Consultant	Masters Degree

Figure 1. *Participants*

These qualitative interviews and usability tests took a total of 15-25 minutes per participant depending on their answer time and active or passive use of the application; Active social media usage refers to online behaviors that facilitate “direct exchanges” among users (Trifiro, B. M., & Gerson, J. 2019), while Passive use involves consuming information without any comments or any attempts to provide social connection with others (e.g., scrolling through news feeds, viewing posts) (Wu Chen, 2016). The Interviews consisted of 14 questions and was followed by a brief usability test and questions on the UX of the group function within the Facebook application. The questions asked in these interviews can be found in section 8 – **Appendix 1**. Questions were selected and decided upon based on Patton's methods mentioned in chapter 3 of this paper - Method and Implementation. Patton (2002) states that it is also possible to cut across inquiry approaches and achieve triangulation by combining qualitative and quantitative methods. This kind of Triangulation includes using different data collecting methods, studying the consistency of data sources, reviewing the findings, and analyzing from different perspectives to validate the qualitative analysis (Patton, 2002).

When asking the participants about their active or passive use of the Facebook application, four of the persona 1 (1.1.1) participants said they were active users while, only 3 of the persona 2 (1.1.2) participants said they were active users. The first segment of interview questions focused on the participants use of SNS, which included them listing which ones they use, Facebook and Instagram were in all participants answers, and included at least one other SNS. This data can be seen in figure 2. All participants except one start using social media when they wake up each day between 5-10AM; five users stated that they use social media three hours a day, while three users said less than one hour a day, and the remaining two said more than four hours a day. The following pie graph in figure 2 is used to easily depict the different social media applications the participants use.

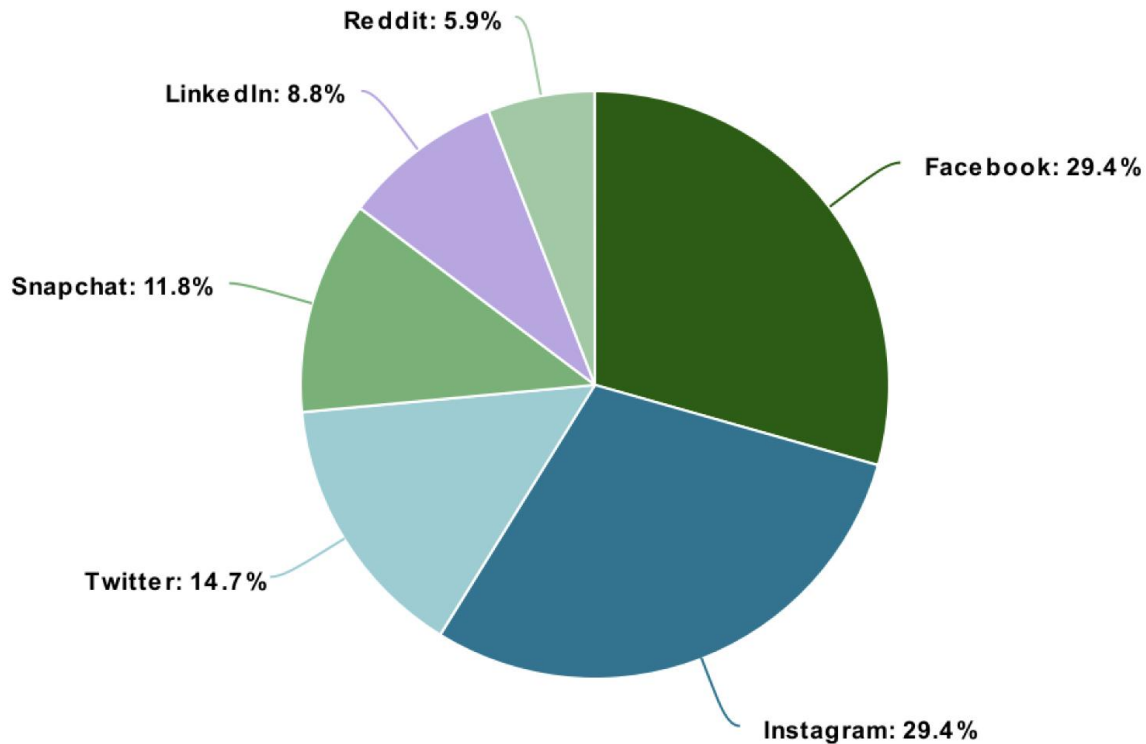


Figure 2. *SNS*

After the first section questions, more specific ones were asked on the purpose behind why these participants use SNS. In Figure 3 we can see a summary of each participant's reasons when answering the question "How do you currently go about using social media?". Some overarching themes that can be noted are connected to friends and family, learning, general information, humor, and news; they found the app helpful and convenient for staying in touch with and communicating with people who they may not "normally stay in touch" with. When the participants were asked "What do you think of Facebook?" Seven out of ten participants shared answers that were negative, and some key terms used were: Boring, Outdated, Monopolizing Information, Overwhelming, Uninteresting, and most of all, Untrustworthy. The three positive answers were related to the participants' content interests as mentioned in Figure 3.

Participant Number	Purpose
1a	see other users content, learn things, generally humor
1b	interests, and communication with friends and family
1c	information, learning new things, sports, world news
1d	entertainment, fill up, connect with friends, inspiration, pop culture
1e	find music, catch up with friends, humor, news
2a	unwind, support users, social movements, suggested advertisements, humorous content
2b	learning things, viewing others content
2c	rarely personal, used to commercial purposes, other content, connections
2d	news gathering, information, family
2e	catch up with people's lives, information (not news), humor, interests

After determining the user's purpose, they were then asked which out of the integrated applications seen in Figure 5 (Main Feed, Marketplace, Groups, Videos on Watch, Dating, Gaming,) they used the most. It was noted that not one of the ten participants stated that they used the Dating or Gaming features on the application, and only two mentioned that they used the Videos on Watch feature; those participants found the features unnecessary to their needs. Therefore, the top three in-app features were Feed, Groups, and Marketplace. These were ranked by the user from 1-3, 1 meaning it is used the most frequently and three meaning the least frequently. In Figure 3 you can see that target group two had unanimous rankings of the features, while target group one varied quite a bit in results.

Participant Number	Feed	Groups	Marketplace
1a	#2	#1	#3
1b	#3	#2	#1
1c	#2	#3	#1
1d	#1	#3	#2
1e	#3	#1	#2
2a	#1	#2	#3
2b	#1	#2	#3
2c	#1	#2	#3
2d	#1	#2	#3
2e	#1	#2	#3

Figure 3. *Integrated Application Order of Preference*

4.2 UX Usability Test

The usability test included the following tasks:

- 1.Start on the home page (Icon on the bottom left of the Facebook Application)
- 2.Go to groups (Figure 4)
- 3.view / scroll content (Figure 5)
- 4.See groups they have joined (Figure 6)
- 5.How many? (Figure 6)
- 6.Go to the group discover page (Figure 7)
- 7.View / scroll content (Figure 7)
- 8.Back home (Icon on the bottom left of the Facebook Application)

The purpose of this Usability test was to further understand how the user's journey and thought process while doing certain tasks within the app. The methods of triangulation from Patton (2002) state that often involves comparing data collected through some kinds of qualitative methods with data collected through some kinds of quantitative methods. This will support my reasoning for conducting and analyzing the Interviews and the Usability test to achieve results that overcome singular methods, lone analysts, and single-perspective theories or models (Patton, 2002).

The test went over the users' experience and comments during the tasks as well as some questions after. The tasks correspond with the different figures below showing the Facebook interface. All ten participants were not aware of how many groups they were in, the page in Figure 6 allows them to see how many they have joined. The number of groups the participants had joined ranged from 5 to 40+, however, the average number of groups participants were actively viewing and interacting with was three each. After completing the usability test, the participants were asked nine questions which can be viewed in Section 8 – **Appendix 2**.

After viewing the group discover page in Figure 7, the participants were asked a few questions. The first question was if they felt the suggested groups were relevant for them, and then which section or sections were the most relevant. The Discover page features the following divided sections: Suggested for you, Friends groups, Popular near you, and More suggestions. Out of both target groups, the results concluded that “Suggested for you” had the most relevant suggestions for the users, while “Friends groups” was the least accurate. Eight out of the ten participants found the suggested section useful and 5 of the eight said they would join one of the groups shown on that page because it matched their interests; they were curious and intrigued but the suggested groups. One participant answer stood out among the others, they stated that they do not approve of personal suggestion due to reasons regarding information privacy on the application, they felt uncomfortable and infringed upon.

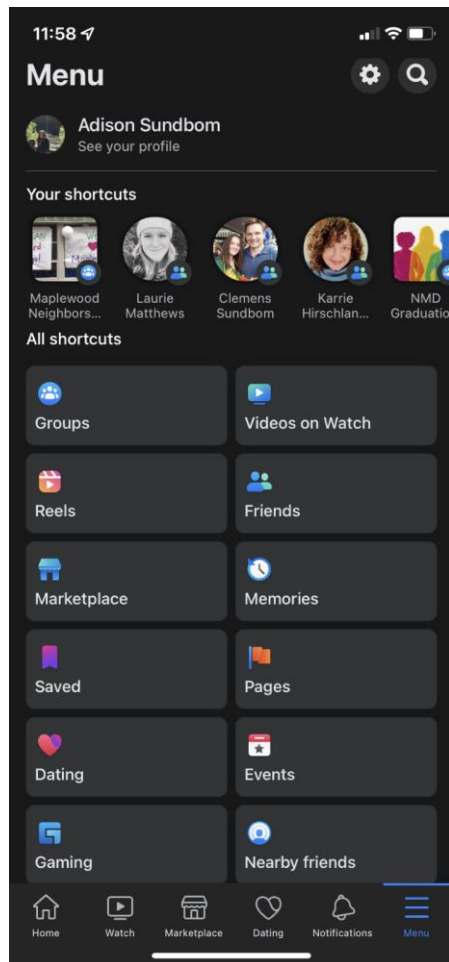


Figure 4. Menu Page



Figure 5. Group Page - For you

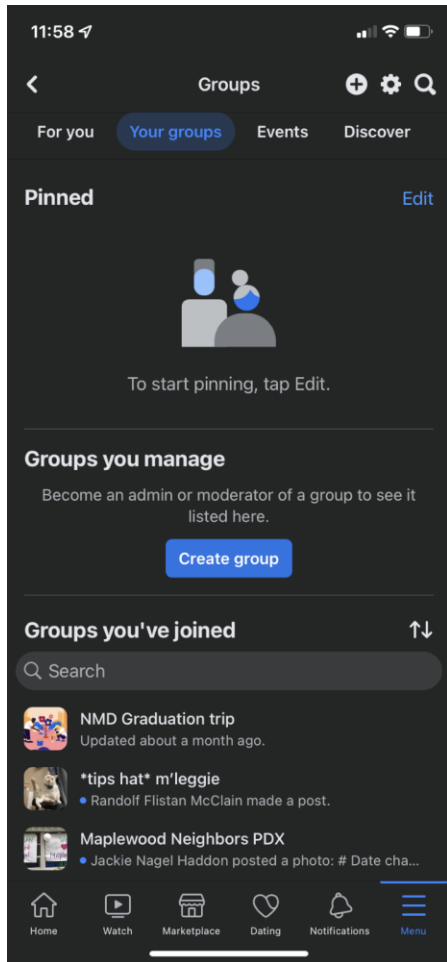


Figure 6. Group Page - Your Group

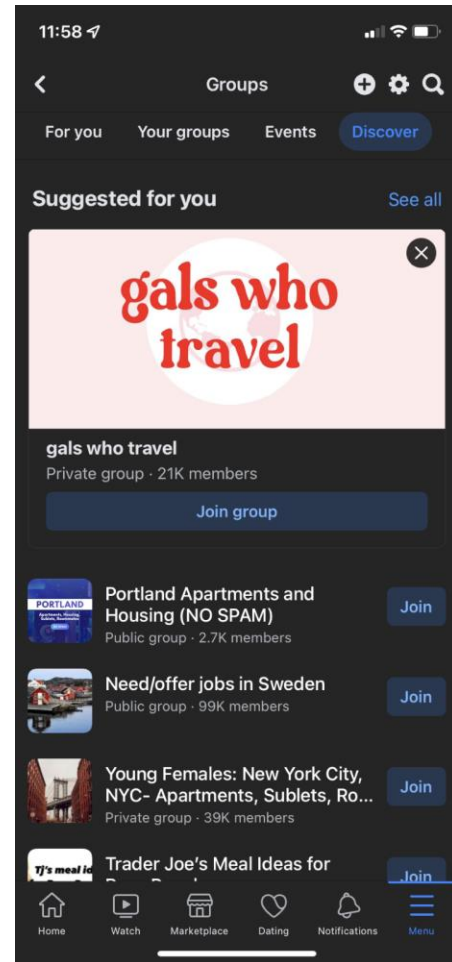


Figure 7. Group Page - Discover

When asked about the interface design of the group feature and how it made them feel, the participants had quite a synonymous response yet again. When asked what they disliked about the design, eight out of 10 mentioned it felt overwhelming amount of content, and they would prefer a better algorithm for recommendations. When asked about the positives of the interface, the majority stated that it was easy to navigate and allowed straightforward access to the groups they were searching for. Not one of the participants in either age group had challenges navigating the application and the group feature. All ten participants stated that they can always find what they are looking for in the application, and each stated they would continue to use it for social connections. The user experience of the application was easy and useful to the participants.

To conclude the study, three final questions were asked to the participants:

- Did you successfully find what you were looking for, or could you?
- Do you trust Facebook/Meta?
- Does this group feature remind you of any existing platforms?

These questions were relating to their overall opinion, use, and view of the application, company, and the specific group feature that was used in the usability test. Overall, all participants stated that they can find what they are looking for on the application, however, they also stated that the majority of the time they are not necessarily looking for anything specific. All participants also claimed that they do not trust Facebook and Meta as a company, this was relating to “information privacy” as stated by more than half of the participants. And finally, the question regarding the group feature. Eight out of ten participants said that the group feature on Facebook does not seem similar to or remind them of any other SNS with the same feature. The remaining two participants stated that the only other SNS they use that would have a similar group feature would be Reddit.

5 Discussion and conclusions

5.1 Discussion of method

When choosing the methods of a qualitative interview and usability test, I expected to get well rounded responses from the 10 participants which would lead to comprehensive results. In this case it was successful in collecting data and analyzing the participants user experience with SNS and these specific integrated applications as well. It was challenging forming the interview questions to ensure that they would allow qualitative and contextual responses from the participants. As mentioned in methods, they were based on Patton's qualitative research method, and that was a reliable source of information. After the first interview I realized that some terms in the questions needed to be defined for the participants to be able to give a conclusive answer. However, having the divided sections in the interviews was a benefit for me both during and after when I needed to analyze the results. Dividing the questions into lifestyle, general social media, Facebook specific, and then the user test was a strength throughout the process. I think having more participants would have made the research more reliable in the sense that there would be a larger group to observe, interview, and test. Even though 10 participants did provide a valid amount of data.

5.2 Discussion of findings

The purpose is to examine how Facebook's interface design has impacted the user experiences relating to functionality and social connection. I would like to determine if or why users pick one feature over the other, and if they are designed based on different user age groups, or simply different target groups. Two different target groups will be studied based on their age, this is to examine if there is a generational difference in their experiences or not. The focus

will be on the mobile application specifically because it is the most easily accessible option for day-to-day use for Facebook users. When evaluating the findings it was challenging to figure out the best way to analyze and report the data. After some thorough research on qualitative interview and usability test analysis I was able to present it in a clear and comprehensive way. The research questions will be restated below with the findings and answers to follow.

1.2.3 RQ1

Which specific Facebook Integrated Application features do users prefer to interact with and why?

When comparing my results to my theoretical background, it was clear that even though our studies differ in ways, the results can be connected between this study and Quan-Haase and Young's study (2010). Their results showed that different SNS allow users to have different social networking needs fulfilled, whether it be for fun, communication, or observation. The participants in my study seemed to use Facebook for similar yet specific reasons; connecting with friends and family being the primary. Which explains why they continue to use Facebook along with other SNS such as Instagram, Twitter, and Snapchat being the three most popular following Facebook.

Similarities were their purposes for using and continuing to use the application and SNS in general; friends and family, learning, general information, humor, and news. And even though all ten participants found the application Boring, Outdated, Overwhelming, Uninteresting, and Untrustworthy, they continue to use the application and specifically the top three integrated applications: Feeds, Groups, and Marketplace. They all preferred these because they attribute to their ultimate purposes for using SNS, this answers Research Question 1. The reason no one in this study used the dating or gaming features at all could be due to the specific lifestyles and interests of the limited ten participants. If a broader study had been done with less limits when selecting participants, it is possible it would include SNS users who do use these features, which means they should not be ruled as obsolete simply based on the data from this study.

The study that Meta (Facebook) did on contribution in social network sites explained that "The experience that users of social networking sites have is primarily a function of the content their friends contribute" (Burke, M., 2009). This statement can be connected to my studies' results. Based on my participants answers on why they use the SNS, it shows that people and Facebook users in general truly contribute to the social network. Even though they might view their social connections as a certain number of people they know, it is much broader. Burke states that users contribute to different social systems within the application; personal posts, discussion groups, and the interactions involved from or to the users. These groups can be

directly compared to the specific Integrated Applications I focus on in this study; Main Feed, Marketplace, Groups, Videos on Watch, Dating, Gaming. Burkes research helps support the results and reasoning behind my study on not only Facebook but also the features selected.

1.2.4 RQ2

Will the results from the study show a difference in UX between the two target groups?

By analyzing the data from the study, it was clear that even though there were some differences between the two participant groups, such as order of preference with the integrated app features was identical for target group two but target group one had completely different responses. The amount of social media usage was also different from target group one to target group two. Target group one uses social media more hours a day on average than target group two. These two variations of answers showed the only notable differences between the two target groups. Therefore, the final consensus is that there were not as many differences as I had anticipated before conducting the study; this answers Research Question 2.

We found that that there is a correlation in target group 2 that participants are passive users and use social media less hours a day than active users, however that correlation does not apply to target group 1. This was the biggest difference between the age groups of participants. Even though the data from that specific question does not show us why they interact with the application, it gives us some background insight into how long they interact with it. Some strengths were that the data had many similarities and differences across both target groups, which is interesting because I was unsure whether there would be a difference or not. By analyzing the data, we were able to see that most of the time the two groups had cohesive responses, besides a few questions such as the one in Figure 3. I was able to answer research questions with the results from the interviews and see the top three features were favored. And as for research question 2, there was a difference between the two target groups, but not as much as I originally thought.

When comparing my results to Jung's (2018) results, they differ quite a bit when it comes to different age groups using SNS. Jung's results showed that the younger-adult group and the older-adult group did not have many, if any, similarities. While my study showed that there are quite a few similarities between the younger and the older groups of participants.

5.3 Conclusions

The Purpose of this study was to examine the User Experience (UX) design of social media, specifically Facebook, and how it affects user interaction on the platform. This included a focus on Integrated Applications which include the following in-app Facebook features: Main Feed, Marketplace, Groups, Videos on Watch, Dating, Gaming. Even though I did not end up using any hypotheses, the study was able to obtain results that provide a further understanding of how the users interact with these features within the Facebook application. This research demonstrates that there are similarities and trends between the two age groups involving their opinions and usage of the application; These patterns relate to both topics of SNS's and UX.

This study is relevant to the field of informatics and related research in that it has observed and reviewed what motivates and controls a small yet representative sample of users through their UX journey on social media platforms - even though it specifically focuses on Facebook specifically. The features on the Facebook application are consistently being changed, added, or removed, which means users are continuously trying to keep up with it. The two target groups that were selected for this study had experience using SNS and Facebook. This study focused on the integrated application features within the Facebook mobile app because it is the SNS with the most users and one of the few applications with so many internal features. The two age groups showed little to no difference between the usage time on their cell phones, purpose of using the app, and overall thoughts on the app based on the interview questions and usability test. Most of the participants had the same amount of difficulty during their UX journey through the application. This was important to the study because it proved that the design and layout of the application posed some difficulties for the users, but also certain aspects of the features — such as the suggested groups feature — was seen as useful and helpful to nearly all of the participants. However, every participant of the older age group rated the Integrated Features the same by ranking the Feed as number 1, Groups as number 2, and Marketplace as number 3; while the younger participants had more varied results. This study would be more effective if it were done with more participants and by understanding user purpose and goals better, this data can be used to contribute to more extensive UX and usability research regarding these Integrated Features.

Overall, the findings suggest that that the participants understand and can easily use the Integrated Application within Facebook, but some might not be necessary to the overall purpose of the users and the application. The study showed that the top three used by the participants were Feeds, Groups and Marketplace. No other SNS provides two similar features to Groups and Marketplace, which is why it can be helpful when improving or adding features to other apps to know why they are favored by users by using this study. Other data from this study is that users stated how Facebook differs from other SNS and that it allows the users to connect with and see posts or information about friends, family, or other people who they would no longer be in touch with. The participants of this study may not enjoy Facebook the most of all SNS, but they do all continuously use it for the specific social connection features and advantages; Even though they may not trust Meta and Facebook which says quite a bit

about what motivates people when it comes to SNS. By analyzing the data and previous research I was able to answer the question on whether age was a deciding factor on the way users interact with the application and their goals; it did not differ on most of the research which shows how similar users can be on one or more SNS. My hope is that this study will help further development of SNS and overall user experience in social media in the future. Because Facebook and Meta are repeatedly introducing new ways for people to use the application, this study may only be useful in the short term, but this will lead to further studies being conducted to contribute to the field of informatics. It is important to continue to conduct studies like these because the information that contributes to informatics and user experience should stay relevant to the way SNS keep changing and developing.

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7 Search terms

User Experience	13
Usability	11
Social Media	37
Application.....	36
Interaction	8
Social Connection	8
Facebook	58
Research Questions	20

8 Appendices

Appendix 1

The following questions were used to interview the participants:

User intro questions:

- How old are you?
- What is your education level?
- Where are you located?

- What does your typical weekday look like?
- When do you normally first use social media on a typical day?
- What are some of the SNS apps you use the most?
- How would you say social media affects you?

Topic specific questions:

- How do you currently go about using social media?
- How much time per day would you say you spend on social media? And specifically, Facebook?
- Do you consider yourself an active or passive user on social media?

Product opportunity questions:

- What do you think of Facebook?
- Why do you use the Facebook platform?
- How has Facebook helped you?
- Which of the following Facebook integrated application features do you use the most?

Marketplace

Feeds

Groups

Reels/Videos

Dating

Gaming

Appendix 2

The following questions were used to interview the participants after the Usability test:

- What did you think of the interface?
- How many groups are you in?
- What parts of the feature did you like the most? Why?
- What parts of the feature did you dislike the most? Why?
- What is the hardest part about using this feature?

- What do you think about the way features information was presented?
- Was the suggested section accurate?
- Why will you keep using this web/mobile app? Why will you not?
- How would you improve this feature?

9 Glossary

SNS - Social Network Services

UX – User Experience, A person's perceptions and responses that result from the use or anticipated use of a product, system, or service (ISO, 2010).

UI – User Interface, refers to a system and a user interacting with each other through commands or techniques to operate the system, input data, and use the contents.

Integrated Applications – Term for the following in-app Facebook features: Main Feed, Marketplace, Groups, Videos on Watch, Dating, Gaming.

Active Use - Active social media usage refers to online behaviors that facilitate “direct exchanges” among users (Trifiro, B. M., & Gerson, J. 2019)

Passive Use - Passive use involves consuming information without any comments or any attempts to provide social connection with others (e.g., scrolling through news feeds, viewing posts) (Wu Chen, 2016).

Usability - The extent to which a product can be used by specified users to achieve specified goals with. effectiveness, efficiency, and satisfaction in a specified context of use. (Rana, 2010)

Methods of Triangulation - Four kinds of triangulation contribute to verification and validation of qualitative analysis: (1) checking out the consistency of findings generated by different data collection methods, that is, methods triangulation; (2) examining the consistency of different data sources within the same method, that is, triangulation of sources; (3) using multiple analysts to review findings, that is, analyst triangulation; and (4) using multiple perspectives or theories to interpret the data, that is, theory/perspective triangulation. (Patton, 2002)

Qualitative - Qualitative research relies on data obtained by the researcher from first-hand observation, interviews, questionnaires, focus groups, participant-observation, recordings made in natural settings, documents, case studies, and artifacts. (Wikimedia Foundation, 2022)

Quantitative - Quantitative research is a research strategy that focuses on quantifying the collection and analysis of data. It is formed from a deductive approach where emphasis is placed on the testing of theory, shaped by empiricist and positivist philosophies.
(Wikimedia Foundation, 2022)