Social Networking Sites vs. Instant Messaging Platforms

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ABSTRACT
The use of chatting, instant messaging, is investigated. This is done by investigating the reasons to start chat conversations and differences in social aspect between social networking sites (SNS) chat and chat via (by) other chat platforms. As there are millions of users of (non-)SNS chat, it is interesting to know more facts about this function. The research is done by holding a questionnaire answered by 30 persons. Conclusions are that chat conversations by SNS are significantly shorter than chat conversations by other chat platforms. There are also more reasons, for example a status update, to start a chat conversation by SNS than by other chat platforms, which can cause an increasing use of SNS chat. Chan’s [3] theory has been confirmed that shy people do not chat increasingly more than non-shy people.

Keywords
Social media, social networking sites, chat, instant messaging, MSN, Gmail chat, Messenger, Facebook, Twitter

1. INTRODUCTION
The use of social networking sites is increasing. Not only in the Netherlands, but across the whole world social networking sites (SNS) such as Facebook and Twitter get increasingly more members [19]. As defined by Murray & Waller [12], social networking websites are virtual communities where people can connect and interact with each other or just “hang out” together online.

One of the new elements of SNS is the instant messaging function, also called the chat. Instant messaging is a form of real-time direct text-based chatting communication between two or more people. By creating or joining a chat room (Twitter) or by just clicking on a friend’s name (Facebook) a chat conversation can be started. The differences of these chat functions are investigated; on the one hand it is clear that SNS chat is “just a normal chat”, but on the other hand SNS provide more status updates and notifications about friends which can be reasons to start chatting.

In this research, SNS chat is compared with chat by other chat platforms such as MSN messenger or Gmail chat. Reasons to start conversations and differences in social aspect are investigated.

Knowing the facts about SNS chat, other chat platforms can adopt their strategy. People can change their chat platform from SNS chat to a chat program or vice versa. In my opinion, it is also useful to know more about the impact of SNS chats. As there are millions of SNS chat users, it is important to get a clear view of this function. At the moment of writing, I have found no statistics about chatting by SNS, which is an extra encouragement to investigate it.

At first literature about SNS, focusing on Facebook and Twitter, and instant messaging is discussed. After that, shortly is noticed what this paper will contribute to the existing literature. In the next chapter the research is explained. This is followed by the results of this research and the discussion of these outcomes. The paper ends with the drawn conclusions and recommendations for future work.

2. RELATED WORK
Social networking sites
SNS (social networking sites) as Facebook and Twitter have millions of members. At this moment of writing, Facebook has 773,779,360 members [19]. According to Facebook, there are more than 800 million users [6]. Twitter has more than 6 million users and 37 million unique visitors according to [18]. This leads to the conclusion that; Facebook has more than 130 times the users of Twitter.

Twitter and Facebook have different chat functions. In the current Facebook layout, all ‘most-contacted’ friends are listed on the right side of the page; with a simple click on someone’s name, a chat conversation can be started. Starting a chat conversations by Twitter is more complicated. You can visit the external website www.twetchat.com and start chatting in a chat room. This chat room is linked to a Twitter account, for example accounts from football clubs, national activities or hobbies. Chatters can join or create a specific chat room and start chatting with others. There is also a possibility to just send real-time messages to each other. This can also be interpreted as chatting. There are no differences in sending messages (not real-time) and chatting by Facebook. The difference in use is that sending messages can be used asynchronous; it is not expected that the receiving party is online also.

Why SNS?
After presenting these huge numbers, a frequently asked question is why people use SNS. What motivates them to create an account? After answering this question, a connection can be made between the reasons why members start chatting with each other and their motives to start chatting by SNS.

According to Cheung & Lee [4], the key values or needs for students to use virtual communities (social networks) are purposive value, self-discovery, entertainment value, social enhancement and maintaining interpersonal connectivity. They also state that social presence is the most important factor; the features of social presence can also encourage that students collaborate and work together. Lampe, Ellison & Steinfield [9] confirm this by saying that Facebook is mostly used for social purposes. Facebook members also seem to be using Facebook as a control tool for maintaining previous relationships, and as a “social search” tool by which they try to find people they have met somewhere.

Subrahmanym, Reich, Waechter & Espinoza [21] show that emerging adults often use internet, and especially social
networking sites, to connect and reconnect with friends and family members.

There are differences in motives to use SNS between the two sexes. Lenhard & Madden [10] state that girls use SNS mainly to reinforce pre-existing friendships, while boys use it to flirt and make new friends.

Chat

The similarity of SNS chat functions and chat platforms is limited. There is a huge difference between them because of the identity of the chatter. In online chat rooms, chatters can create an account with a false or random identity. This means that these chat possibilities cannot be compared. In the research, the facts and statistics about online chat rooms (with possibilities for creating fake identities) are ignored.

An important difference that should also be noted, is that instant messaging differs from face-to-face or phone conversations, because multitasking is easier (there can be more chat conversations simultaneous or other activities like homework). In this manner, chatting differs a lot from other communication channels.

According to a study of Radicati [16] there are more than 2.5 billion instant messaging accounts. The important market players are: Actiance, AOL, Bloomberg, Cisco, eBuddy, Facebook, Fring, Global Relay, Google, IBM, Meebo, Microsoft, Novell, Skype, Symantec, Tencent, Thomson Reuters and Yahoo!

Why chat?

Next to the reasons why people sign up for a Facebook or Twitter account, the reasons for taking an instant messaging account or to start chatting are summarized.

Studies from [2][8][11] suggest that most teens and youth adults use instant messaging to talk to their friends for coordination of face-to-face meetings or to chat when they cannot talk face-to-face. Duck [5] and Raby & Walther [15] state that frequent instant messaging (IM) conversations allow teens to exchange important information for building and sustaining relationships. Valkenberg & Jochen [22] add to this that frequent chat conversations increase closeness in some friendships.

Grinter and Palen [7] report that teens use chat for the ability to talk to people whey they would not otherwise be able to do so. Quan-Haase [14] states that instant messaging has emerged in the past several years as a popular way to stay in touch.

It is important to be aware of the fact, that this literature is about instant messaging on different platforms; also noted in Radicati’s list. These studies are focusing both on non-SNS and SNS chat platforms whereas this research is focusing on them separately.

In Birnholtsz’ research, 21 participants (teenagers), were asked why they did adopt instant messaging. The results from this research confirm the known literature, which is also summarized above. All participants used instant messaging several hours a day (during homework), had 2-3 conversations at a time, talked with 5-15 people once a week or more, and had 20-50 people in their contact lists. He also concluded that instant messaging users start chatting. They start maximizing the use of leisure features, which is becoming distracting and annoying. Their contact lists also grow and their social time become scarce; they ultimately abandon chatting.

Muscannel & Guadagno [13] concluded in a very actual research (yet not published) that women low in agreeableness reported using instant messaging more often than women high in agreeableness. It may be that women low in agreeableness rely on social networking sites more heavily for interpersonal communication because it allows them to communicate with others more effectively, compared to less restricting communication modes in which their disagreeable characteristics would be more salient. The researchers concluded that women low in agreeableness could do this because it would take more time for individuals to pick up their low agreeableness.

As summarized above, there has been a lot of research about SNS and about reasons to create a Facebook- or Twitter-account. The general use of instant messaging and reasons to start chat conversations has been discussed. There have been collected some numbers from both subjects also: almost 800 million Facebook users, 6 million Twitter users and 2.5 billion instant messaging accounts.

This paper provides another research to the reasons why people chat, but here exactly the same questions are asked for SNS chat and for non-SNS chat. This means that the results can be easily compared and conclusions can be drawn because the participants and the type of research stay equal. Next to those reasons, other aspects as the use of offline messages, the amount of friends and the duration of chat conversations are measured and compared. At the end some outcomes about the shyness of the participants are compared to findings of theories about shyness and (a)synchronous communication.

3. RESEARCH

To investigate the duration of chat conversations, the reasons to chat and the various differences in use, the research will answer the following main question:

“What are the differences in social aspect between social networking sites chat and non-social networking sites chat?”

For both SNS chat and other chat platforms the following sub-questions will be answered:

R1. ‘What are reasons to start chat conversations?’

R2. ‘Is instant messaging used for personal or work objectives?’

R3. ‘How much is offline messaging used?’

R4. ‘What is the average duration of a chat conversation?’

The first sub-question will be answered by a summary of all given reasons, if there are any. The following three sub-questions are answered by averages of the scores that participants gave. The usability of various chat platforms is not taken into account in this research.

3.1 Approach

The research is done by holding a questionnaire. This questionnaire is made by the Form-option from Google Docs. This questionnaire consisted of five parts.

**Personal, BFI:** At first, some questions about personal information were asked. These questions also include the BFI-10 question lists with an extra question about shyness.

**SNS use:** In the second part some questions about SNS-use were asked; the frequency of use and what types of SNS are used.

**Chatting via non-SNS and via SNS chat platforms:** The third and fourth part consisted of questions about chatting; what chat medium is used, how long chat conversations take, the average amount of chatting a week, reasons to start chat conversations, the balance between work and personal objectives, the amount of friends with whom one chats in a week and the use of offline
messages (asynchronous chatting, sending messages when the receiver is offline). In the third part these questions were answered from the perspective of a chatter using a non-SNS platform. In the fourth part these questions were answered from the perspective of a SNS-chatter. In that way, meaningful comparisons can be made.

**SNS in the future**: The fifth part consisted of some open questions about thoughts of participants about the differences between SNS chat and non-SNS chat and the question if SNS chat would become more important in the future.

The questionnaire is distributed to students or pupils aged 15 – 26. The questionnaire is distributed through informal channels and by posting it on Facebook. In that way, it is likely that a quite high percentage will have a Facebook-account.

Exactly 30 persons have filled in the form. The group consisted of 17 male and 13 female respondents. 66% of the respondents were aged 18 - 22. The questionnaire is distributed among college acquaintances, so it is expected that most of them are students.

### 3.2 Results

The most important results are summarized in figures and tables in this section. Not significant outcomes are only shortly noticed.

#### BFI-10

Information about the personalities of the participants is obtained by the BFI-10 [17]. This test contains ten questions. With the given answers, one personality can be measured on five areas: extraversion, agreeableness, conscientiousness, neuroticism and openness. Next to the ten standard questions, one question about shyness is added.

Participants answered two questions about each characteristic by scaling from 5 (absolutely) to 1 (absolutely not). As the range of the answers is from 1 to 5, the standard mean is 3. The mean of the characteristics of the participants is calculated and results in the following values:

- Extraversion: 2.8
- Agreeableness: 2.8
- Conscientiousness: 3.0
- Neuroticism: 2.6
- Openness: 2.9
- Shyness (single question): 3.8

It can be said in general that the average of the participants on all areas is some below the mean score. This does not refer to the score on shyness; on the contrary: this figure is quite high.

#### SNS

93% of the participants have or had Facebook, 73% Hyves (a Dutch SNS), 43% Twitter, 43% LinkedIn and 23% Google Plus. The SNS that is mostly used is Facebook (81%), followed at large distance by Twitter (6%).

Some open questions about the reasons to start chatting were answered in the last section. These reasons have been summarized and grouped. In Table 1 the reasons participants gave for starting chat conversations via both non-SNS and SNS chat platforms are mentioned. The frequency of the reasons is mentioned in the left and right column. This table presents the answers in response to research question 1: ‘What are the reasons to start chat conversations?’.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social contact</td>
<td>18</td>
</tr>
<tr>
<td>Making appointments/organizing</td>
<td>15</td>
</tr>
<tr>
<td>School/study/work</td>
<td>6</td>
</tr>
<tr>
<td>Need for information</td>
<td>8</td>
</tr>
<tr>
<td>Just talking/leisure</td>
<td>8</td>
</tr>
<tr>
<td>Exchanging music/pictures</td>
<td>1</td>
</tr>
</tbody>
</table>

Next to this, there are also some reasons which are mentioned only as reasons to start a SNS chat conversation. These results are presented in Table 2.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reacting on a status update/show that you sympathize</td>
<td>6</td>
</tr>
<tr>
<td>To tell something about yourself</td>
<td>2</td>
</tr>
<tr>
<td>Exchanging longer stories about how life is going</td>
<td>2</td>
</tr>
<tr>
<td>Contacting someone not available on non-SNS chat platforms</td>
<td>1</td>
</tr>
</tbody>
</table>

As there are extra reasons to start a chat conversation by SNS, this can point to an increasing use of SNS. To ‘control’ this conclusion, the following question has been questioned to the respondents: ‘Should SNS play a more important role in the future?’. 13 Participants voted for yes, 3 voted for no and 7 voted for perhaps. There are mainly three reasons they gave for these answers, which have been summarized in Table 3.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>On non-SNS chat platforms you can only chat; on SNS you can do much more.</td>
<td>13</td>
</tr>
<tr>
<td>SNS are used for more frequent and shorter chats, caused by status updates/other information you can see from each other. On the other hand SNS gives more distraction.</td>
<td>10</td>
</tr>
<tr>
<td>With SNS chat it is easier to have more contact with strangers or long not seen friends</td>
<td>5</td>
</tr>
</tbody>
</table>

#### Chatting

Regarding the question about ‘if chatting is used for work or for personal objectives’, the mean score of non-SNS chat platforms is 3.57 and of SNS chat platforms is 3.83, whereby the scaling is from 1 (mostly for work) till 5 (mostly for personal). According to the ANOVA test these variations are not significant. These results present answers to research question 2, ‘Is instant messaging used for work or for personal objectives?’.
The outcomes about the use of offline messages show small variations. Regarding non-SNS chat platforms, 22 participants use it “never” or “not a lot” compared to 16 participants by SNS chat platforms. The frequency of the use of offline messages is thus slightly higher by SNS chat platforms, but this is not significant according to the ANOVA test. These results present answers to research question 3: ‘How much is offline messaging used’.

The question ‘What is the average duration of your chat conversations’ could be answered by a grid; the participants could indicate how long their conversations took “at most”, “frequently”, “average” etc. In Table 4 it is summarized how long their conversations took the most and frequently. This table presents answers to research question 4, ‘What is the average duration of a chat conversation’?

### Table 4

<table>
<thead>
<tr>
<th>time (min)</th>
<th>non-SNS</th>
<th>SNS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>at most</td>
<td>a lot</td>
</tr>
<tr>
<td>0-1</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>1-5</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>5-15</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>15-40</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>&gt; 40</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

The variance analysis from ANOVA[20] gives F(1,118) = 3.912, p = 0.05. This means that SNS chat conversations significantly take shorter than non-SNS chat conversations.

There are also no significant variations in the amount of friends with which one chats. Comparing SNS chat with non-SNS chat gives the following results: 15 and 10 participants respectively chat with 1-2 people, 5 and 5 participants chat with 2-4 people and 4 and 6 participants chat with 4-7 people. Also 6 and 8 participants chat with less than 1-2 people, which could mean that the chat function is not that popular among the participants.

There has been a comparison between the amount of SNS accounts a participant had and his/her indicated shyness. From the participants, 8 are shy, 14 are partly shy, 5 are partly not shy and 0 are not shy. From the shy and partly shy participants the average amount of their SNS accounts was 2.95 compared to the average 1.8 SNS accounts from the 5 partly not shy participants. The variance analysis from ANOVA gives F(1,25) = 2.46, p = 0.128.

Regarding the use of instant messaging, there are no significant variations between shy and non-shy participants. The average duration of chat conversations from shy participants was 2.54 and for not shy participants 2.0. The difference between these averages is not significant according to the ANOVA test.

3.3 Discussion

According to the BFI scores, the personalities of the participants were normal; the most figures were close to the 3, the standard mean. The shyness score was the only exception, with a relatively high score: 3.8.

Chan [3] concluded in his research about shyness, sociability and computer-mediated communication that shyness is a significant predictor of increased frequency of email use and social network use, and that shyness is not a significant predictor of the frequency of instant messaging use.

This first conclusion can also be drawn from this research; shy participants had significantly more SNS accounts than not shy participants. The second conclusion from Chan matches with this research too; there were no significant variances in the average durations of chat conversations from shy and not shy participants. Hereby it is important to notice that the duration of chat conversations is measured and not the frequency.

The most participants had Facebook (93%) and even for 81% of the participants Facebook was the most used SNS. These results can be above average, as the questionnaire is also distributed through Facebook and the questionnaire could only be filled in by SNS users.

There are several reasons to start a chat conversation. The most frequent reasons to start a chat conversation are mentioned by both SNS and non-SNS chat platforms. The largest differences between these chat platforms are that 24 participants mentioned the reason ‘Social contact’ by non-SNS chat platforms compared to 18 participants by SNS chat platforms. Also non-SNS chat is used more for school or work objectives by non-SNS chat platforms (10 participants) than by SNS chat platforms (6 participants).

The reason that is mentioned mostly, ‘Social contact’, is also the most important reason to sign up for a SNS account (Lampe, Ellison & Steinfield [9]) or to start chat conversations, which is stated by Quan-Haase [14], Duck [5] and Raby & Walter[15].

Next to these reasons there were a couple of reasons which were mentioned by SNS users, whereby the reason that is mentioned mostly was ‘Reacting on status updates/sympathizing’; 6 participants mentioned this reason. The existence of this reason was also suggested in the introduction; status updates give chatters subjects about which they can talk.

4. CONCLUSIONS

Research question 1 is answered by Tables 1 and 2. The reasons that were mentioned the most to start chat conversations are social contact and making appointments/organizing.

Research question 2 is answered by the ANOVA test. There are no significant differences in the type of objective between non-SNS and SNS chat platforms.

Research question 3 is also answered by the ANOVA test. There are no significant differences in use of offline messages between non-SNS and SNS chat platforms.

Research question 4 is answered by Table 4 and by the ANOVA test. SNS chat conversations take significantly shorter than non-SNS conversations. This can be due to status updates, which is a reason that is frequently mentioned as a clarification of the question if SNS chat will play a more important role in the future.

It is proved also that there are more reasons to start chat conversations by SNS and that the reasons and the occurrence of these reasons mentioned by non-SNS chat platforms are mainly equal to SNS chat platforms.

Chan’s statement that shy people should use more email and social networking sites and that they would not chat increasingly more is also significantly confirmed.

At last it is useful to name that the reasons according to participants regarding the question ‘if SNS should play a more important role in the future’ are that SNS have more functions, SNS are used more for frequent and shorter chats, caused by status updates and by using SNS it is easier to have more
contact with friends one has not seen for a or to come in contact with new friends.

5. FUTURE WORK
Because the number of participants (30) is quite small and the questions were limited, a next research should contain the same research method with a larger segmentation; the same questions will be answered for a couple of SNS and non-SNS chat platforms, like Facebook, Twitter, MSN and Gmail chat.

It is also interesting to investigate the motivations behind the occasions given by people who use SNS. If someone posts a status update, why does he do that? Is this because the SNS user wants attention or because he wants to share information? And if he wants attention, should he want it by using chat (other SNS users cannot see it) or by comments (can be seen by other SNS users)?

6. REFERENCES