



User Perceptions of Help Posts in Commu Help Exchange Application

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ABSTRACT

Online help exchange in neighbourhoods can benefit individuals and strengthen neighbourhood communities. Investigating users' insights and expectations on help is important for the design of an online help mediating application and matching users with relevant posts. This paper presents a study on users' perceptions of characteristics of posts on a help exchange application Commu. We conducted a survey ($N = 45$) and 12 semi-structured interviews of Commu users and found three themes that present what participants consider in the posts: 1: Through the informative elements in the user interface (UI) users find relevant information. 2: Pragmatic attributes define mediated help in concrete manner. 3: User perceptions and reactions are emotional consequences of reading the posts. Together these themes provide new insights on users' considerations regarding help exchange posts and can help design better help mediating services.

CCS CONCEPTS

• **Human-centered computing**; • **Human computer interaction (HCI)**; • **HCI design and evaluation methods**; • **User studies**;

KEYWORDS

User Experience, Online Help Exchange, Neighbourly Help, Recommendation Systems

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1 INTRODUCTION AND BACKGROUND

Exchange of help in neighbourhood has potential to benefit individuals and the neighbourhood community [4, 12]. Engaging in online neighbouring behaviours, e.g., peer-to-peer help exchange, is associated to sense of community and community awareness [12, 13, 17]. Online networks are remarkable channels for exchanging help, also locally [3, 10, 14]. According to earlier studies the shares of posts that were requests to mobilize actions or resources, i.e., help, from others, were 47% in local Facebook groups [14] and 83% in local online forums [10]. An example of an online help-exchange channel is help-mediating application Commu. It leans on an idea that helping is a remarkable way to build support networks and it brings variety of benefits to the helpers. Commu is preparing to increasing number of posts in Commu application. Recommendation systems seek a solution for the online information overload by providing automated and personalized recommendations for users [2, 5, 7, 9, 16]. Matching people who need or offer help in urban neighbourhoods have also been proposed in user experience research [11]. The continuous development of Commu and the design of successful recommendation system of neighbourly help require consideration of the physical and social context of the neighbourhood and understanding users' relationship to help. [11, 18]. In this qualitative study we explore user perceptions of online help exchange posts. We investigate the research question (RQ): *What types of information users consider when assessing posts in a help mediating application?* To study these issues, we conducted user research among Commu users. We examine how users characterize information that they receive from the application and the posts. This study contributes to the research of online communication tools in neighbourhoods.

2 STUDY DESIGN

This study consisted of an online survey ($N = 45$) and 12 semi-structured interviews. We gathered the data for this qualitative study during November and December 2022 We recruited the participants by an invitation in a newsletter of Commu. Each participant was rewarded with a voucher worth of a chocolate bar.

2.1 The Commu Application

In the help mediating application Commu people can offer and ask for help. Commu is a Tampere based start-up company, founded in

2021 [19]. Commu has 40.000 registered users. In Commu application, helping can be peer-to-peer, non-governmental organization (NGO) volunteering opportunities, or companies doing corporate volunteering. In Commu, users can create posts (named as notices in the current version of the UI), i.e., help offers and requests. Users can reply to others' posts by messaging the person who has published the post. Commu provides users with a map view, a search function, and time-based listing of posts. Users can look for certain type of actions, check the latest posts, or to find what has been posted near them recently (see Figure 1). Commu allows users to specify what they are interested in and generates recommendations. The recommendation system is planned to be augmented with AI-based tools. The use of the application is free of charge for individual users. NGOs can also post their opportunities for free, however, the business idea of Commu is to sell extra services for NGOs and companies to manage volunteering work and gain data from it.

2.2 Study Methods

This qualitative study consisted of a survey and interviews, followed by the analysis of the data.

2.2.1 Survey. The survey gained 45 valid responses. Two responses were excluded because they included only empty or irrelevant answers. 33 respondents identified themselves as female, 11 as male, and 1 as other. Respondents age range was 18–63 years, with a mean age of 42.4 years ($SD = 11,3$). One third of the respondents lived in a single person household.

The survey included seven questions regarding the use frequency and purposes of using Commu application. Two open-ended questions aimed at exploring, what information of posts users considered relevant: “When you browse help mediating posts, what do you pay attention to?” and “What things in help mediating posts are important to you?” A multiple-choice question measured the relevance of pre-set dimensions for the participants when browsing the help mediating posts. The survey ended with question “What prevents or could prevent you on using Commu?”

2.2.2 Semi-structured Interviews. We invited 20 survey respondents to the interviews, resulting in 12 interviews. 6 interviewees identified themselves as female and 6 as male. The mean age was 47.6 years ($SD = 8.0$).

In the interview questions we addressed participants' reasons and motivations for using Commu and for offering and requesting for help in general, preferred subjects of help, from whom the participants want the help from, and how are they using Commu. We asked about what they pay attention to in posts and what kind of posts they would like to find and answer to. Also, the impact of location and locality and aspects that might hinder from using Commu were discussed. As a part of the interview, the interviewer asked the participant to list what kinds of help they consider worth knowing of, first their own interests and then in general. We gathered the attributes describing these to a canvas on the Mural application. To explore how single attributes associate each other in participants thinking, we asked participants to make combinations of the listed attributes or list new attributes that they thought could fit together.

2.2.3 Analysis. First, three authors constructed an affinity diagram [6] of the attributes of the posts that were gathered from participants. In this phase we made initial categorization of the attributes and drafted preliminary themes. First author prepared the survey data for analysis by exporting the data as a spreadsheet and removing the non-relevant responses. Two authors conducted thematic analysis [1, 15] for the interviews and the survey data, focusing on the two key questions in the survey regarding the relevant characteristics of posts for users: first the initial coding was done individually, then two authors combined, reviewed, and named the themes into their final form. While reviewing the themes they were also compared to the categorization and preliminary themes found in the affinity diagram.

3 RESULTS

As an answer to the research question, we found three main themes and their subthemes that describe what types of information users consider when assessing the posts (table 1).

3.1 Theme 1: Informative elements in the UI

Informative elements in the UI are aspects of the posts that the participants expect to provide an easy and fast access to the relevant information about the post. As such elements participants described headline, user profile, profile picture and informative language in the description of the help. Although they could be considered to describe rather the source of the information than the characteristics of it, they are chosen as a theme because most participants described those as the actual information they seek for. Descriptively they were associated to the first impressions that participants had regarding a post or person who is posting. While the elements are concrete and visible, participants mostly described that informative elements in the UI mediate abstract information or arouse emotions.

Elements in the UI are passages for the users towards other information that is presented in the following themes.

(The post should be) clear and preferably have the profile picture in it. (P7)

UI elements function as attention gainers and gateways; users often make the decision to read the post further based on those. If they fail to communicate the details of the offer or request, the post is likely to be disregarded.

3.2 Theme 2: Pragmatic Attributes

Pragmatic attributes of posts refer to the most concrete information regarding the mediated help. This theme divides to four subthemes which are attributes of help: *the type of help*, *the location / distance*, *the time-related dimensions* (i.e. when the help can be given or is needed), and *the provider* (their username and personal description) *and the target group of help*. The theme of pragmatic attributes was conspicuous in both the survey answers (Figure 2) and the interviews.

Type of help refers to the quality of mediated help and answer to the question “What help is exchanged?” From the different modes of helping mentioned in the survey and the interview data, we categorized six types of help. *Services* refer to helping by doing something. *Social interaction / company* is, e.g., reducing loneliness or company

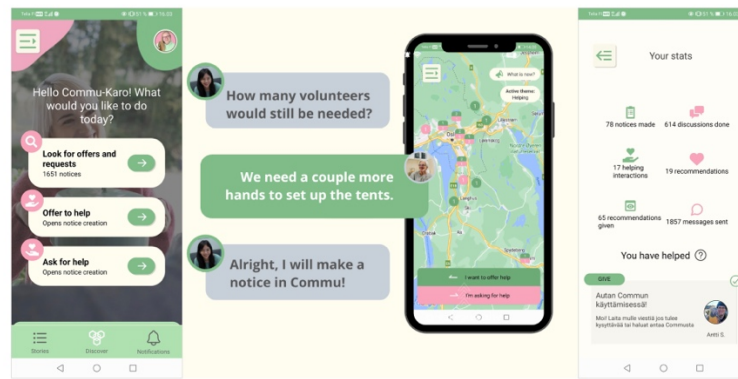


Figure 1: Images of the Commu app UI: home screen, use example, map view, and user statistics.

Table 1: Themes and subthemes

Theme (T)	Subtheme (ST) / Definition
T1: Informative elements in the UI	- / Information and emotions from first impressions
T2: Pragmatic attributes	T2/ST1: Type of help T2/ST2: Location/distance T2/ST3: Time related dimensions T2/ST4: Provider and target group of help
T3: User perceptions and reactions: Emotions, Intuition, Trust and Motivation	T3/ST1: Motivational factors T3/ST2: Meeting the personal expectations and needs of the user T3/ST3: The appearance of the person behind the post

for hobbies. *Circular economy of goods* means borrowing, giving, or trading goods, e.g., tools. As examples of *guidance / teaching / instructing* participants mentioned e.g., helping Ukrainian refugees to enter Finnish society, or to teach people to do basic bicycle repairs themselves. One of the recognized types of help aims at *providing basic needs* for the receiver of help, however this type can include different types of actions. *Collective help* refers to helping together or many people at once, for instance a cooperation meeting for food aid or some other shared purpose.

The dimension of *location / distance* had mostly pragmatic value for participants. Some considered extra value for local neighbourhood level helping, for instance by advancing communality. However, for most short enough distance or otherwise convenient location was important because it made helping or receiving help easier, or even possible. In comparison, some mentioned remote helping as a possibility. The convenience regarding distance or location varied.

Time related dimensions define when the help is expected to happen or what is the estimated duration. By those the users estimate whether the help mediated in a post is suitable for their schedules or not. Also, the publication date and assumed duration of the request or offer was considered relevant. Participants weighted if the posts are urgent or long lasting by their nature, and if the older posts are expired. Some participants described seasonally oriented help as

a type of help, referring to e.g., Christmas aid or seasonal help in summer, which links time related dimensions to type of help.

Provider and target group of help refer to the basic information on who would offer and who is expected to receive the help. Most participants said it was not very meaningful from who they would receive help from, if the provider appear trustworthy. The appearance of the person behind the post is discussed in the following section. The relevance of the target group of the help varied. From the help providing perspective, some participants had special target groups they were interested in helping. Some participants said that the provider of the help or the target group were not relevant for them.

3.3 Theme 3: User Perceptions and Reactions: Emotions, Intuition, Trust, and Motivation

Posts provoke thoughts, emotions, and expectations, in the readers of the posts. We call these aspects *User perceptions and reactions*. They are not attributes of the posts, but rather reactions of assessing those. Nevertheless, they are target of users' consideration. Intuition played an important role for participants in participants' decisions, e.g., selecting suitable forms of help or deciding if the person behind the post is trustworthy.

...intuition that I use it to check the posts, and how does it feel for me. (P9).

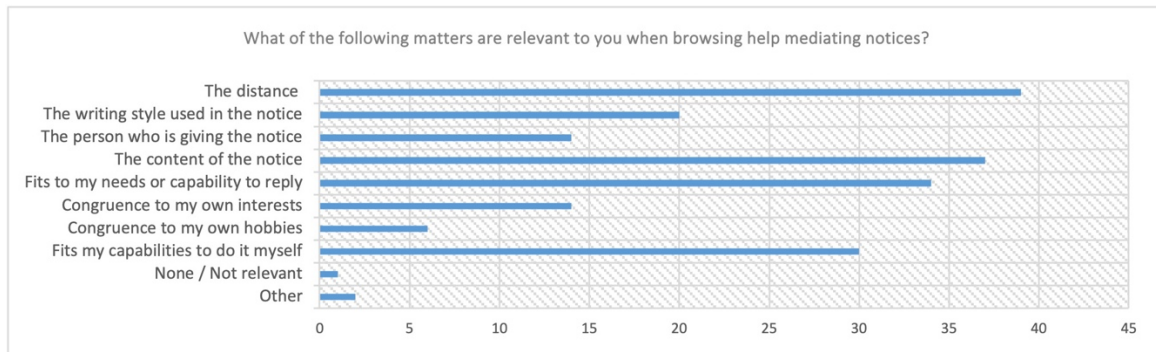


Figure 2: Pragmatic attributes stand out in survey answers on the matters that are relevant to the respondents.

User perceptions and reactions can be divided to three subthemes which describe the subjects of these perceptions.

Motivational factors refer to the attributes of the posts that motivate help. Participants wanted to help people, who's needs are real. Participants' definition of a real need varied regarding type and scale of help. For instance, help regarding the basic needs or gardening were both counted as real needs, if participants considered those were asked with pure intentions and the requests did not appear as abuse. Motivational dimensions relate to other themes. As mentioned earlier, some participants were motivated to help certain target groups, for instance elders or Ukrainian refugees. Motivations to help and receive help were also related to factors outside the post, e.g., personal and pragmatic needs, reciprocal helping, hedonic attributes, internal motivations to help, and communality. Motivations are also tightly connected to the following subtheme about expectations and needs.

Rather than listing a complete list of certain types or categories of help or other attributes regarding posts, participants (11 interviewees) typically mentioned *meeting their personal expectations and needs (as a user)* as the focus of their attention when looking for help mediating posts. It varied among participants, how well-defined their expectations and needs were. Many of those who considered themselves rather help providers than receivers mentioned that they browsed the posts without anything special in mind and looked for something that might be suitable for them.

I want to help the people that I can with my own skills and capabilities. (P13)

On the other hand, for participants, who for instance, because of illness or poverty, struggled filling their basic needs, needs were clear and they were organized in seeking to fill them. Their range of expectations towards the help was wide.

The appearance of the person behind the post refers to the image drawn on the maker of the post for the reader of the post. In comparison to earlier presented pragmatic dimension of provider and target group of help, this refers more to the appearance and interpretation. The participants made interpretations, sometimes strong, based on the limited information given through Commu. Often these interpretations were made through the UI elements presented in Theme 1. There were different reasons for participants to pay attention to who is the person behind a post. It was often motivated by the need for trust, but for some it aimed at making the

helping more interesting, social, and personal. Several participants were concerned about misuse in this distant and anonymous online initiated setting that leads to physical meeting.

4 DISCUSSION AND CONCLUSION

The themes we present in the results of this qualitative study answer to our research question on three dimensions. First, *the informative elements in the UI* describe the concrete elements in the posts (i.e. headline, user profile, profile picture and informative description of help), that users look at when reading the posts. From those elements they gain the information from other characteristics, dimensions that function as a basis for decision making regarding the posts and the mediated help [8]. The concrete information which is transferred through those UI elements, and which functions as the basis of the decision making, is presented in the second theme, *Pragmatic attributes*. *User perceptions and reactions* are rather results of reading the post than attributes of those. Third theme is highly dependent on the individual who is assessing the post. These themes explain the users' decision making and inform the continuous development of Commu and the planning of a potential recommendation system [8]. These themes provide new insights on users' thinking regarding online help exchange and on the social and physical context of users regarding help exchange [8, 11, 18]. Compared to earlier research on mobilization requests [3, 10, 14] our results on the one hand consider two-way exchange of help instead of one-directional, but broader subject of mobilization requests. On the other hand, our inductive approach on the data provided more insight on how users think, and what is behind their decision making, instead of categorizing the posts. As limitations, the sample of this study was relatively small, and the context of the study was limited to Commu application.

Users of Commu have variety of motivations, interests, and needs regarding help, which impacts the information they consider. Our research data suggested preliminary findings out of the scope of the research question. For instance, it appears that the needs of those who request for help is clearer and more defined than the vaguely structured motivation of those, who are willing to help, however have no specific target in mind. Therefore, there seems to be need for not just recommendations, but also nudges towards action of help, that can be considered in UI design. Considering the design of recommendation systems, this study provides early-stage

user understanding, however, not comprehensively, but rather as an initial study. Our results suggest that users are positive towards recommendations if the amounts of posts increase to the extent that such is needed. In addition to the pragmatic attributes, the recommendation system could use the users' motivational factors as an input. However, users' reactions and interpretations complicate help recommendations. The topic of help recommendations provides an interesting area for further research and development on the technical solutions, but also for human sciences.

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