

Seeking Employment in a Non-Native Language: Online Information-Seeking Behavior of Refugees in Germany

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Abstract

In 2015, over a million refugees arrived in Germany. After settling into their new environments, these refugees needed to find employment. The search for work, and the orientation to the German job market, increasingly takes place on the Internet requiring language skills and digital competence. The purpose of this study is to examine the online information seeking strategies of refugees in Germany and barriers that affect a successful search. The study builds on data collected from an online study with seven refugees solving different tasks. Search queries for each participant were recorded and analyzed using an approach of both the mixed and grounded theory method. Participants did not follow any observable systematic strategy but relied on supporting tools such as the search engine for providing suggestions or corrections and translation websites. Participants mainly used three formulation tactics: copying, suggestions, and autonomous formulating. The formulation of the query seemed to be the most challenging to the participants.

Keywords: employment seeking; information seeking behavior; refugees; web searching

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Introduction

In 2015, Germany welcomed over one million people fleeing from war, hunger, poverty, and other violations of their human rights (Geiger, 2016; UNHCR The UN Refugee Agency, 2018). Refugees face the major challenge of finding information to navigate everyday life situations (Caidi & Allard, 2005; Lloyd, 2015; Oduntan & Ruthven, 2019). Language barriers complicate the information search and therefore immigrants and refugees tend to ask their social network for information rather than searching the Internet (Atiso et al., 2018; Shoham & Kaufman Strauss, 2007; Hakim Silvio, 2006). Moreover, employment in Germany is mostly sought and advertised over the Internet (Weitzel et al., 2017). Thus, refugees need to have sufficient online-searching and information literacy skills to discover job offers that suit their abilities. To determine barriers refugees might face while searching the web, Stiller and Trkulja (2018) conducted a lab-based experiment with seven refugees to assess their digital skills. The study at hand, which is based on a bachelor thesis (Köhler, 2018), builds on this data to analyze the information seeking behavior of seven participants. A video screen capture of the online interactions of the participants is the basis for answering the following research questions:

(RQ 1) Which information seeking strategies do participants use?

(RQ 2) What barriers affect successful searching?

To answer the first research question, an information seeking strategy is defined as a sense of a specific plan someone follows while seeking information. Similarly, Marchionini (1989) provides this definition: “The execution [...] of an individual’s information-seeking system for a particular information problem is considered an **Information-Seeking Strategy** [emphasis appeared in the original text] (ISS)”(p. 56). As can be seen in the following literature review, there is a lack of studies of refugees’ information seeking strategies.

Literature Review

Even though Information Science research can contribute to migrant information behavior literature, German literature lacks studies in this area. One of the few studies in Germany with focus on migrant information behavior evaluated the digital skills of seven refugees (Stiller & Trkulja, 2018). The study at hand reused their collected data.

Studies of immigrants worldwide do not provide universally applicable results. Immigrants cannot be seen as a homogenous group (Caidi et al., 2010). Their needs and challenges might differ from the needs and challenges of immigrants in other countries. Studies address the analysis of the information needs of refugees (Lloyd et al., 2013; Lloyd, 2014; Oduntan & Ruthven, 2017), as well as which meaning information has to them and how they seek it (Obodoruku, 2017). Obodoruku (2017) observed that most refugees are seeking information, but what they find usually does not match their information need.

Furthermore, current Information Science research strongly suggests that immigrants primarily use their social networks to obtain information (Atiso et al., 2018; Shoham & Kaufman Strauss, 2007; Hakim Silvio, 2006), along with using the Internet (Oduntan & Ruthven, 2017). The use of the Internet can prove to be difficult when searching in a second language. Al-Wreikat et al. (2015), as well as Chu et al. (2015), discovered that the information seeking behavior and the information needs of the participants differ in their second language compared to searching in their mother tongue. The participants follow more strategies in their native language and according to Chu et al. (2012) the queries are more often reformulated when the participants use a non-native language. Moreover, Rózsa et al. (2015) and Brazier and Harvey (2017) report that their participants feel unsure when searching in a second language and have trouble evaluating search results. Most studies point out that declining search quality is not only linked to the language barriers but also to differences in cultures and norms (Chu et al., 2012; Rózsa et al., 2015; Brazier & Harvey, 2017).

Study Design

The data for this study is part of a broader study by Stiller and Trkulja (2018) on the assessment of digital skills of refugees. Stiller and Trkulja (2018) conducted a lab-based experiment with seven refugees from Syria and Iraq to assess their digital skills. All participants possess a residence permit for Germany and a German-language-level of at least B1 (“CEF Levels”, n.d.), which equals an “Intermediate Low - Mid” on the scale of the American Council of Teaching of Foreign Language (Academia Tica, n.d.). This language level is deemed as sufficient by the German government for everyday life interactions (Bundesamt für Migration und Flüchtlinge, 2013). The participants had to solve nine online tasks that were divided into four groups: operational, formal, information, and strategic tasks, following the framework of van Deursen

and van Dijk (2009, 2014). The activities, such as inputs on the computer, were recorded as video files with no audio tracks.

The recorded videos were analyzed using a mixed-method-approach. The qualitative data was evaluated using a grounded theory approach (Glaser, 1978 as cited in Urquhart, 2013, p. 23). The screen recordings were transcribed containing the queries posed by the participants and the results displayed by the search engine. Additionally, clickstream-like lists were developed. The quantitative data was drawn from both the transcripts and the clickstream-like lists. It includes time spent on search engines and websites, how often mistakes were corrected, how many queries were formulated, how much time was needed for the formulation, what kind of search query was used, and so on. Following an approximate grounded theory method by Glaser (1978 as cited in Urquhart, 2013), open, selective, and theoretical codes were created based on the transcripts. No more data was collected after developing the first draft of a theory.

One aspect of the study was the analysis of the queries based on the following concepts:

- *Search Query*: The input of the participant into the search bar of the search engine in form of a string of terms (Jansen et al., 2009).
- *Term*: “[A] series of characters within a query separated by white space or other separator” (Jansen et al., 2009, p. 1361).

Findings

All participants used Google as their primary search engine. In total, there were 183 search queries entered. On average, the more difficult the task, the more queries were used, more websites visited, and more time spent on them. Only the task type “Formal” is an exception. The average values per task type are depicted in Figure 1.

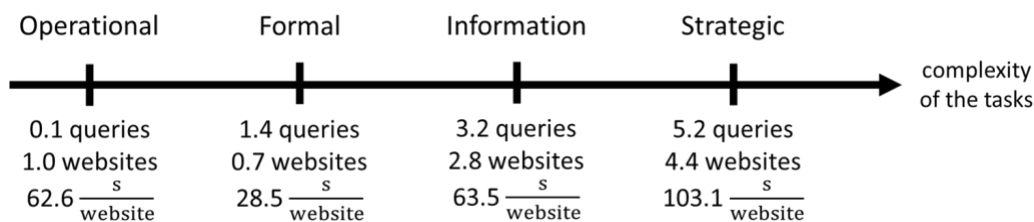


Figure 1. Average values per task type.

Participants used “suggestions”, “copying”, and “autonomous formulation” as tactics for query formulation. A query formulated autonomously does not use any copied terms or suggestions of the search engine. Thus, if a query that used one of the other two formulation tactics was later altered autonomously, it was still not counted as autonomous formulation. All but one participant accepted at least 50% of the suggestions by the search engine such as “Did you mean”, “Including results for”, and “Searches related to” (“suggestions”); 35.5% of all queries contained terms copied from either the task itself or websites the participants had visited (“copying”). The participants formulated the query by themselves only 38 times (“autonomous formulation”). In addition, terms were copied to the query 65 times and suggestions—while entering the query—

were used 45 times. The individual use of query formulation tactics per participant is depicted in Figure 2.

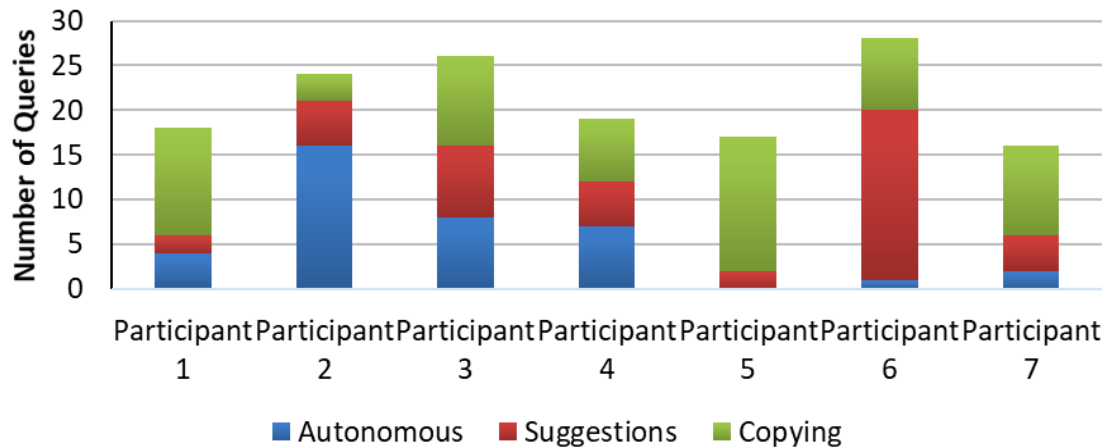


Figure 2. Query formulation tactics per participant.

The participants mainly formulated new queries (123 queries; 67.2%). Moreover, 35.5% were altered. Most often queries were specified, which means that at least one term was added to the query or at least one term of the query was changed to a term with a restrictive meaning (Rieh & Xie, 2006). Moreover, the queries often contained language mistakes such as misspellings, wrong word forms, or irrelevant aspects. Corrections were made for only seven of the search queries. Even so, it was mostly done automatically by the search engine or through suggestions given by the search engine.

Discussion and Implications

The goal of this study was to determine the participants' information seeking strategies and the challenges they face while searching online. A clear strategy in the form of a plan could not be found. However, we noticed a strong reliance by participants on suggestions and corrections made by the search engine (Marchionini, 1989). Any suggestions made by the search engine were readily accepted and the copied text was not shortened to improve the search quality. However, the participants did not seem to follow a specific self-developed plan and rather reacted to the responses of the search engine. They used translation websites for key passages needed for tasks and often copied words to use as query terms. The normal search process is hence backed by the use of supporting tools.

One clear barrier to successful searching is a lack of sufficient language skills. This was especially visible during the query formulation. The formulation of the information need in the form of a query was seemingly the most challenging aspect for the participants. The formulation tactic of "copying" as a means of avoiding mistakes was often observed. It is also possible that this tactic was employed because it saves time and is simply more convenient.

The best searchers (among the seven participants) copied more terms than the other participants and made less mistakes. This might be explained by higher-level German language skills or a more efficient use of supporting tools such as translation websites or recommendations by the search engine.

Whenever a query was altered by the participants, it was mostly made to be more specific. This is in accordance to findings by Rieh and Xie (2006), Chu et al. (2012) and Jansen et al. (2009). The participants seemed to get search results that were too generic. Komlodi et al. (2011) found that the search quality decreases when searching in a non-native language. This is probably the case for our study participants as well, since their queries contained language mistakes which led to insufficient search results.

Furthermore, several studies report that immigrants find employment through their personal networks rather than online (Atiso et al., 2018; Brücker et al., 2016). Therefore, using the Internet for finding work might have been completely new to the participants and they might have felt unsure during the search process (Rózsa et al., 2015). This in turn, could be another barrier that influenced successful searching.

To summarize, most of the observed difficulties were due to language and possibly cultural barriers (i.e., misspellings or language difficulties, such as a lack of understanding). This could explain why the participants did not often formulate queries by themselves, but rather repeatedly accepted suggestions from the search engine and copied words taken from the task or from query terms found on the websites. The use of supporting tools, like translation websites and suggestion of the search engine, is the most noticeable feature of the participant's search strategy. Due to the observed barriers that affect a successful search, more guidance and orientation for the refugees regarding online employment-seeking are deemed not only desirable but necessary. Such guidance could be in the form of an information literacy class or personal counseling sessions. More research needs to be conducted to advance our understanding of these important issues, and to improve social and economic inclusion of refugees.

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