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It is a Matter of Perspectives

A Literature Review of Users and Use in an Archival Context

Abstract

Digitalization and technological developments lead to increased expectations of instant access to archives and archival information. Concurrently, archival information systems and access tools are becoming more advanced, which opens new arenas for possible users and use in the archival domain. Research on the development of digital archives, finding aids, and archival interfaces, highlight the importance of reflecting the understanding of user needs, behaviors, expectations, and their use of technology. The current study, based on a systematic literature review with thematic analysis, addresses the multiple perspectives of users and their use in the archival context. The results show that a 'user' is a complex and heterogeneous conceptualization, pragmatically adapted depending on perspectives and contexts. Studies of users and use are strongly bound to their context and the current study further highlights the question of if and how users and use can be viewed outside of their contexts. Research points to a more individual perspective where different user studies and methods explore the user's cognition and perception to paint a picture of what a user understands and how they use archival records.

Keywords: users, use, archival context, literature review

Introduction

Digitalization and new technologies have influenced and affected archives by producing digital records and creating digital processes and tools. This, with the increasing expectations of instant access, and as archival information systems and access tools are becoming more advanced (Rhee, 2015), leads to new arenas for possible users and use in the archival domain. Access and use are

closely related and in the context of digital material Tibbo argues, “[...] if no one were to ever use them they would be worthless” (Tibbo, 2002, p. 3).

The electronic environment and new technological solutions create expectations and opportunities to gain new users, other than the traditional archive users (Craig, 1998). In 1998, Craig emphasized the question “how can we get a fix on the real wants and needs of users and cater for these through the archival services we provide for the future?” (Craig, 1998, p. 121) New technologies also bring opportunities to explore who the user is and what different needs they might have, and research points to increasing participatory approaches. Iacovino (2015) did a study on participatory archives and elucidated that users who are subjects of a record could participate in the shaping of archives to highlight the users’ narratives. Participatory approaches are often connected to cultural memory, and as a method to encourage memories of marginalized communities (Shilton & Srinivasan, 2007). It could also be interpreted that this approach sheds light on the user as a co-creator (Haberstock, 2020). A participatory approach tends to lead to the question of what perspective should dominate the process of developing, for example, an archival description or an interface. As the question that Hedstrom (2002) posed in the context of the development of digital archival interfaces:

“Should our interfaces reinforce archivists’ perspectives on what constitutes an archive or should we enable users to construct their own notions of archives based on the needs or values that matter most to them?” (Hedstrom, 2002, p. 42). Interfaces in this context are defined as “the means by which a human communicates with hardware or a software application” and Hedstrom also refers to the term as a metaphor: as a site of power of representations of archives where archivists include or exclude access of potential uses of archives (Hedstrom, 2002). Hedstrom emphasized the importance of considering what perspectives archival interfaces should be based on. However, regardless of whose perspectives or whether it concerns digital archives or the design of new archives management systems, it is described as something that should be based on the needs of the users and their expectations (Lack, 2007; Smith & Villata 2020).

The development of technology opens new opportunities to understand users and how they use archival material. Research should now focus on a better understanding of their characteristics and needs, and this starts with the questions, how are users and use described in the existing literature, and who is a user in the archival context? This paper aims to explore how existing literature deals with the concept of users and their requirements when using archival material.

Method

The method used for this study is a systematic literature review with a thematic analysis inspired by Braun and Clarke (2012). The databases chosen for this study were Academic Search Elite, ProQuest, and Scopus. The selection criteria in these databases involved English-written articles, source type being scholarly journals, dissertations and theses, conference papers, and proceedings.

The search process consisted of two different keyword searches. The first was a Boolean search combining the keywords user*, use, and ‘archival records’ with the operator AND. Without quotation marks surrounding archival records, the search resulted in several irrelevant articles on other types of records (e.g., medical records). Truncation was used with the keyword user* to retrieve results on both user and users. This also resulted in a large number of irrelevant articles and the keyword use was changed to usability. The second Boolean search consisted of the keyword’s user*, usability, and ‘archival context’. The archival context was added since the first initiated search resulted in several articles outside of the archival domain. Even though usability studies may investigate the usability of, for example, archival information systems or the usability of finding aids, this change from use to usability listed articles that also investigated the user. The articles that were chosen for the current

study addressed the use of archival records, the use of archives, user or users of archival records, or archives within different archival contexts.

A total of 240 abstracts were read and 65 articles were chosen for a closer read. In total, 34 publications were selected, relevant to the focus of this literature review. The selected articles were published between 1984 to 2019.

Thematic analysis

The analytical method used to systematically identify and organize different themes in the chosen articles was thematic analysis, a six-phase approach described by Braun and Clarke (2012). The method can be used in qualitative research as a way of identifying how a specific topic is described, by coding and analyzing data systematically. In this case, how the concept of users and use is described in the existing literature. The six-phase approach consists of (1) familiarization with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing potential themes, (5) defining and naming themes, and (6) producing the report. Following the steps in the thematic analysis, all articles were read and reread during the first phase of the analytical process. The initial codes created in the second phase were concise and both descriptive and interpretative. In phase 3, the codes were analyzed to identify similarities and overlaps between codes and to search for themes. The codes that had similar characteristics and patterns were aggregated in clusters. When creating themes in phase 4, the researcher aimed to identify if there was a specific topic that united the clusters of codes and how the potential themes related to the research question and the entire data set. In phase 5, when the themes were identified, they were named and defined by clarification of their uniqueness and a summary of their essence. All themes combined created a coherent narrative of the interpretation of the data created by the researcher (Braun & Clark, 2012).

All publications explored in the literature review involved the use and users of archival material and archives in various ways and different contexts, as well as different subject areas. Following the steps in the thematic analysis, the articles were given codes to search for themes and similar patterns. This resulted in the creation of three different themes identified in the articles. The first theme, *Outside of the archival comfort zone*, maps articles that focus on user needs and user interactions when developing and implementing new or different methods and applications to enhance archival functions or design archival systems. The second theme, *Educational and participatory approaches*, views different types of users as participants, exploring how and what users as participants may contribute to different archival functions. In the third theme, *Searching for an understanding of a user*, several publications focus on the understanding of the user in combination with different topics such as user cognition, user perception, and user behavior. The focus of these studies is the user, who it is, what a user understands and perceives, how the user acts et cetera. In this third theme, the predictions of how the archival domain needs to work towards an understanding of future use and predictions of what future users might need are explored. A description of the selected themes is presented in Table 1.

Theme	Description
1	<i>Outside of the archival comfort zone:</i> Reaching outside of the archive by implementing and developing different methods and applications to enhance archival functions by learning <i>how</i> users interact with different existing tools. This theme elucidates the user needs when developing and designing new technologies.
2	<i>Educational and participatory approaches:</i> Involving users and archivists as active participants in different archival developments. Outlining knowledge of how to become an expert user and develop frameworks for archival functions.
3	<i>Searching for an understanding of a user:</i> Exploring who the user is, the cognition of a user, how a user perceives archival information, and how a user values archival information. Outlines predictions of how the archival domain needs to work towards an understanding of future use and predictions of what future users might need.

Table 1 Descriptions of selected themes

Findings

The results of the literature review are structured according to the three selected themes: 1) outside of the archival comfort zone, 2) educational and participatory approaches, and 3) searching for an understanding of a user. All publications concerned use and users in different contexts, as well as different subject areas. The different subjects and the selected themes are presented in Table 2.

1. Outside of the archival comfort zone:	2. Educational and participatory approaches:	3. Searching for an understanding of a user
Appraisal	Active participation	Future user
Archival arrangement	User education	Information-seeking behavior
Archival description	User engagement	User behavior
Archival systems design	User feedback	User cognition
Finding aids		User orientation
Interfaces		User perception
User interaction		User profile
User need		User satisfaction
User surveys		
User value		
Web-analytics		

Table 2 Selected themes and different subjects in articles.

Outside of the Archival Comfort Zone

“It is time to bring descriptive skills, honed and tested in the crucible of standardization, to the Brave New World of electronic media. Yet, we need to know that this is a different environment and archivists need to be willing to develop new skills and test new approaches.” (Cox, 1998, p.33)

This was written by Cox in 1998 in the context of the advancement of technological solutions in the archival environment. According to Cox (1998), the expectations of direct access to archival records were increasing, and Cox highlighted that the archival domain should pay more attention to how records may be used. At this time, common users of archival records in an archival repository were historians and other humanities researchers, and Cox argued that when making records more

accessible other users should be kept in mind, such as political leaders and policymakers. As access to more information increases, Cox (1998) highlights the importance of understanding the records and that archivists should take note of how the core aspects of archival records are interpreted and understood. "What archivists need to consider is how the rush to tools such as the web provide an opportunity for creating a greater understanding of the archival value" (Cox, 1998, p. 30).

This was further examined by Cox (2008), who studied how archival finding aids are considered by outsiders, outside of the archival community. Cox argues that when creating archival finding aids, archivists need to "[...] think of their audiences" (Cox, 1998, p. 24), and consider who the intended user is. In the study, finding aids were examined from three different viewpoints: (1) as museum exhibitions, which are often evaluated by different scholars such as historians or anthropologists; (2) examined by design experts, to examine the messages that they represent; and (3) examined as accountability advocates (Cox, 2008). In the context of museum exhibitions, compared to archival functions, even though museum exhibitions are directly connected to an audience, archival finding aids are created to assist researchers when using them. In this comparison, archival finding aids are connected to an audience as well but are seldom created with the audience in mind. According to Cox (2008), archivists have been focusing on creating finding aids with descriptive standards, despite knowledge of its inconsistent use among researchers.

Prom, Rishel, Schwartz, and Fox (2007), raised the question of technical obstacles and archivists being excessively bureaucratic when it comes to both creating and sharing archival descriptions. In their development of the Archon software package, a web/database application, they highlight the difficulties that the archival community experiences with content and data structure standards described to facilitate access. Instead, these standards are described as difficult to use for archivists and decreasing access for archival users. Archon is described as less technically demanding, automating several technical tasks, and based on archival needs. The Archon software package is an example of an initiative that attempts to meet the pressing need for access that lies in the archival domain, but without having to learn technical coding (Prom et al., 2007).

The use of archival materials can be connected to, as Cox (2008) describes, the roles and value of the archival materials and it is linked to how the user interacts with different archival functions. In 2004, Prom studied experienced and inexperienced users, and how they use different methods when searching for archival information. The focus of the study was to measure users' interactions with online archival finding aids. According to Prom (2004), previous studies on the use of archival finding aids had focused on the archival viewpoint rather than user interaction. Profound knowledge about the users' use of archival finding aids would, according to Prom (2004), contribute to the elucidation of user search tactics as well as a redesign of interfaces. The measurements of the interactions showed that it was beneficial to be a user with computer experience and experience in using archives rather than a novice user with little or no experience in archives (Prom, 2004). Duff, Yakel, Tibbo, Cherry, McKay, Krause, and Sheffield (2010) emphasize the lack of information about how users interact with finding aids and websites and highlight the importance of considering the user needs in the creation process. The article reports on a toolkit that was developed in the Archival Metrics Project. The toolkit aimed at facilitating user-based evaluations in college and university archival repositories. In their study, they gathered feedback from users and included questionnaires and procedures to ensure accountability and improve archival services. Even though the participants who took part in the pilot testing of the study reached a high level of satisfaction regarding the findings of their surveys, many revealed that user evaluation studies were seldom conducted since they are time-consuming, and often require experience and administration (Duff et al., 2010).

Surfing on the wave of new technology and implementing applications that are used in commercial domains, and could be implemented in the archival domain, is something several articles focus on. Prom (2011) introduces web analytics as a method, often used for commercial purposes such as maximizing profit. This could be used to measure user actions and gain a systematic understanding of users' interactions with descriptive information and digital objects posted online. Tools like web analytics could gather data that paints a picture of use (e.g., time consumed on a specific web page, or the number of pages viewed) without direct contact or observation, methods that Prom (2011) argues affect the user interaction, meaning that it is difficult to act normal when being observed. Even though there are many different software applications for sharing descriptive information that enhances interaction, interpretation, and use of records, Prom (2011) argues that archivists do not have a systematic knowledge of how a user interacts with the descriptive information shared online. The article elucidates an approach to outline and visualize online users to improve archival services, enhance access, and increase their use (Prom, 2011).

Other authors that introduce commercial approaches to reach outside of the archives and archival institutions are Riley and Shepherd (2009), who focus on the role of archivists and shareable descriptive metadata principles for archival description. Written with the rapidly growing wave of new technology in mind, the writers argue that the archival community needs to further develop shareable archival descriptive metadata that would benefit not just the archives but also services outside the archives. One example is combining archival metadata, such as records with geographical components or architectural records, with historical or contemporary maps and integrating them into services outside the archives such as Google Earth. The archival community is described as having the responsibility of sharing the knowledge of the content of the archives, not just with regular users but with different kinds of users and external services outside the archives (Riley & Shepherd, 2009). Archivists are described as considering the different needs of users, as Duff et al. (2010) write; "If archivists spend scarce resources and time creating archival systems and services without considering users' need, they may fail to meet their ethical and professional responsibilities" (Duff et al, 2010, p. 574). Adams (2007) argues, as digital records are increasing, that archivists need to consider the various needs and expectations of different user groups. Riley and Shepherd (2009) recommend the archival community to be proactive and incorporate the principles that the shareable metadata framework is built on in workflows to make descriptive metadata shareable.

Cushing and Cowan (2017) did an explorative study involving users of digital surrogates to understand how non-research users access and use archival collections via a mobile walking tour app. In the context of digital surrogates in galleries, libraries, archives, and museums (GLAM) in Ireland, the writers describe a lack of critical approaches to the context and purpose of outreach as an activity. Previous research on the subject of digital surrogates has focused on potential researchers rather than non-researchers as users. The study was based on interviews with participants who had used Walk1916, a digital surrogate with AR (augmented reality) and geolocation features, about their perceptions of the value of digital surrogates. The writers explored the use of digital surrogates in the context of the primary and secondary value of records and highlighted that the use of the digital surrogate may contribute to the understanding of the secondary value. The digital surrogate combined features such as geolocation and AR, which enhanced the perception of the past and present and "created a secondary value associated with the digital surrogate" (Cushing and Cowan, 2017).

Conway's (1986) second definition of use described as "[...] usefulness or the use made of archival information to benefit individuals, groups, or society as a whole" (Conway, 1986, p. 396), sheds light on making archival information accessible and user friendly for a wider context than to explicit known archival users. Hedstrom's (2002) article that explored user interaction with the archives through

archival interfaces emphasizes the increasing emergence of computer interfaces and how a well-designed interface can increase the use by new users. According to Hedstrom (2002), archival interfaces, structured as virtual creations or as physical structures are critical nodes of archival representation. As a prediction, and with the article of Cushing and Cowen (2017) in mind, Hedstrom argues:

Rather than entering the halls of a custodial institution and interacting with the human mediators who serve as both gatekeepers and providers of archival documents, users may well bypass the human interface in favor of whatever can be rendered on their computer screen. (Hedstrom, 2002, p. 41)

How these interfaces can be used and interpreted is decided by the people who create them. In the article, Hedstrom (2002) predicts new generations of users “who will approach archives through computer interfaces rather than visiting physical archives and interacting with tangible documents” (Hedstrom, 2002, p. 24).

Another author who focused on how users interact is Rhee (2017), who explored the connection between user studies and appraisal practice in U.S. state archives and records management programs. Rhee (2017) discusses that determining the value of records based on use has been described as a necessary approach by appraisal researchers. However, in the context of appraisal practice, it has been discussed that use as an appraisal factor per se may not contribute to future predictions such as user information needs or research trends since it is considered an unreliable measurement. Since the 1980s, empirical research methods have been employed that could be beneficial for the appraisal practice and could provide information about both users and use regarding: “who uses records, what information users need, how users locate and access records, what kind of records are used, and how records are used” (Rhee, 2017, p. 152). This was in focus already in 1984, when Freeman (1984) proposed a user-oriented archival administration and argued that examining how and why users approach records may contribute to appraisal standards. Even though the knowledge that can be gained through user studies regarding appraisal may contribute to planning, analysis, and evaluation within appraisal practices, Rhee (2017) argues that ‘user study researchers have neither articulated what aspects of users and use appraisal archivists should consider nor how to apply the information to appraisal practice’ (Rhee, 2017, p. 153).

Summary – Theme 1

The articles on the theme Outside of the archival comfort zone, accentuate the importance of proactivity in involving users and how they interact with different tools such as archival finding aids. They also accentuate testing new technology to gain a deeper knowledge of use and users of archival material as well as highlighting awareness of users’ needs, to gain knowledge of these varying needs of different users in different contexts.

Educational and Participatory Approaches

When exploring literature on use and users of archival materials in the databases, several articles regarded users as participants in different ways and contexts.

Huvila (2008) explored user participation in the archival context by developing digital archives for two Finnish cultural heritage sites. The purpose of the study was to discuss the concept of participatory archives and to test the arrangements and the integration of the archives with actual and potential users. According to Huvila, the knowledge about users has been based on the assumptions that the people who come to the archive know what they want, are knowledgeable enough to be able to express their needs in archival terms, and, even better, can help themselves as much as possible both in practical matters and in analyzing and interpreting the records (Huvila, 2008, p. 16). The assumption

that users have more knowledge about procedures or processes is highlighted by Yakel (2002), and vice versa, that researchers often misjudge and overestimate the knowledge of the archivists (Yakel & Torres, 2003).

By creating a digital archive with a participatory approach, Huvila (2008) argues that transparency will increase and highlight a variety of motivations, interpretations, viewpoints, arguments, and counterarguments. However, as Huvila (2008) discusses, participation from a postmodern view is “[...] built into any human interaction with information, which makes it and its implications also essential in the archival and records management contexts” (Huvila, 2008, p. 18). Users represent all kinds of viewpoints and interpretations that form both an individual and a common understanding of archives and their content (Huvila, 2008).

Participatory approaches are increasing in the area of the development and design of recordkeeping systems. Engvall (2019), who reviewed publications about user participation in the domain of information systems, argues that the user’s needs and perspectives must be taken into consideration early in the design process. The increasing participatory approach and the requirement of online access is an energetic factor for user perspective on information systems, however, successful user participation needs a clear infrastructure for roles and responsibilities. This should include levels of participation as well as to what degree they will participate. The knowledge gained from studies of use and users may contribute to the perspective of primary and secondary needs in a close period of time (Engvall, 2019). For future studies within the recordkeeping domain, Engvall (2019) raises issues such as perception studies, and a deeper understanding of the users since users carry a variety of viewpoints. However, considering participation may bring new challenges to the table, and Engvall (2019) emphasizes the need to analyze power relations, dominating values, and the roles of the users who participate. “The question is who should influence what, in what way and for what reason” (Engvall, 2019, p. 328). The increasingly participatory approach can be viewed as a development of the question that Hedstrom (2002), raised of whether archival interfaces should be based on user needs and values or the perspectives of archivists, and if users should be given space to construct based on what they perceive.

Participation can also be about highlighting users’ needs where the archival domain is expecting to actively participate in reducing the gap between archival institutions and their audience. Based on user interactions and the need of archival users, Harris and van der Merwe (2009) did a case study at the University of Pretoria Archives in South Africa that aimed to increase the awareness of archives to meet the growing need for access. According to Harris and van der Merwe (2009), electronic record-keeping has made the archivist an active participant rather than, as was previously common, a passive receiver. They argue that this has also changed how people perceive the availability and use of information. When discussing how to make archives more accessible, the authors quote Ericson (1990), who argued that the goal is to use and that various tools exist to achieve this goal (e.g., description, identification et cetera). Thus, as Ericson puts it “[...] but if, after we brilliantly and meticulously appraise, arrange, describe and conserve our records, nobody comes to see them, then we have wasted our time” (Ericson, 1990, p. 177). Ericson lists four concepts as cornerstones when creating outreach activities for archives: enhance the knowledge about the users, improve the image of the archivists and archives, and enhance the awareness of archives by education of archives. Ericson (1990) argues that some of the things about the users are already known, such as the usual choice of archival material, and when they usually visit archives and connect it to known circumstances and events, but this knowledge is not used effectively (Ericson, 1990).

Education within the archival domain has been explored in several studies and according to Vilar and Šaupperl (2015), the need for user education is well-known among archivists. In their study of the

student as a user, they raised the issue of user education, here described as archival literacy, and argued that archivists often perform individual education (e.g., how to conduct research). In a study on the concept of common ground, Yakel (2002) explored how this could be further developed between archivists and researchers. Based on interviews with archival users, Yakel examined the use of access tools and the utilization of user education. According to Yakel (2002), user education can be used when creating a common ground that aims to improve for both researchers and archivists. The findings indicate that archivists often had a preconceived idea of the users being familiar with the understanding of archival operations and archival terminology. To make the archives useful and the content understandable, Yakel (2002) proposed a detailed educational curriculum created by both researchers and archivists. This was further developed by Yakel and Torres (2003), by defining the characteristics of expert users and creating information literacy for primary sources. After conducting interviews with both expert and novice users of archives, the writers argued that to efficiently work with primary sources, three forms of knowledge are important: domain knowledge (e.g., knowledge about the subject), artifactual literacy, and archival intelligence. The latter, archival intelligence, comprises three dimensions: “1) knowledge of archival theory, practices, and procedures; 2) strategies for reducing uncertainty and ambiguity when unstructured problems and ill-defined solutions are the norms; 3) and intellectual skills” (Yakel & Torres, 2003, p. 51). Artifactual literacy is described as connected to the assessment of the interpretation of the value of records as evidence. To have the ability to assess has been considered in more recent studies. User assessment is highlighted by Green and Lampron (2017) as a factor that can be used to gain more knowledge about the actual use of digital collections. The study by Yakel and Torres (2003) highlights basic conceptual knowledge, knowledge about developing frameworks for archival management, representation, and descriptive practices as well as knowledge about search query formulation as important for a researcher to reach the level of an expert user.

Summary – Theme 2

The second theme Educational and participatory approaches regarded articles that focused on how user education could contribute to increased use and increased understanding of the archives and their content. Several articles mention increased participatory approaches that are described as something that might reduce the gap between the archives and their audiences. However, participatory approaches demand clear infrastructures when it comes to different roles, responsibilities, and levels of participation. Since dominating values may exist, a participatory approach should consider questions regarding how someone should influence what. Users represent different viewpoints and interpretations which may form both an individual and a common understanding of the archives and their contents.

Searching for an Understanding of a User

The question of what a user is or what defines a user has been elucidated in several articles of this study. This section presents different studies that aim to disentangle who the user is by using different methods.

Since the 1980s, users have been considered in several publications, in different contexts, and often related to specific known users. Freeman (1984) argued that it is a misassumption that the profession of the archival domain knows who the users are, and that the profession is user-orientated. In the context of archives administration in 1984, Freeman argues that the domain needs to have a systematic approach rather than learn impressionistically. Maher (1986) did a study about the knowledge and understanding of use by examining ongoing statistics on use. By studying reference correspondence Maher argued that ‘use will be defined as the retrieval of information from archival and manuscript holdings, finding aids, reference tools, and staff memories – in other words, reference service’ (Maher, 1986, p. 15-16). Maher (1986) described use as one of the fundamental purposes of

archival and manuscript programs and as something to be highly regarded. The use of archival records and archives was often speculative since a systematic analysis of statistical and textual information about use were approaches seldom used (Maher, 1986). Turnbaugh (1986) considered the definition of use described by Maher (1986) to be limited to government repositories and added that the definition must include all areas within the archives as all functions of archives are user-orientated. The definition should reflect the different functions of the archives, the governmental as well as the cultural (Turnbaugh, 1986).

Another researcher discussing user studies from this time is Conway (1986) who performed a study on the implementation of a framework to study users and to build a program for user studies. Conway depicted two different types of use: (1) use “in reference rooms when researchers scan collections, series, folders, or individual items in search of information relevant to their needs” and, (2) use described as “-usefulness or the use made of archival information to benefit individuals, groups, or society as a whole” (Conway, 1986, p. 396). According to Conway (1986), there is a balancing act between the archival materials and the users who use them, what kind of information are they using and how are they using it?

In 1986, Conway defined users as: ‘Users, in the most elementary sense, are people who seek information in archival materials’ (Conway, 1986, p. 386). Yeo (2005) extended the definition by saying; ‘[...] a user, is defined as anyone who employs records or seeks information about them, or uses other systems and services provided by an archival institution or records management unit, for any purpose (Yeo, 2005, p. 26).

Duff and Johnson (2002; 2003) made two studies on the information-seeking behavior of known user groups. In 2002, they studied the information-seeking behavior of historians at two Canadian universities. In both studies, the authors conducted interviews with each user group. The first study focused on historians’ experiences in Canadian, American, and British archives, on how they locate and use primary sources. The findings highlighted that contextual pre-existing knowledge of a subject is of great importance for researchers to be able to both find and interpret information (Duff & Johnson, 2002). The second study focused on genealogists and their information-seeking behavior, how they seek information, what knowledge they have, as well as issues concerning seeking information and questions regarding different access tools. This study focused on known users, and the purpose was not to make archival materials more accessible to other users but to facilitate access by developing the design of archival information systems based on the needs of this specific user group (Duff & Johnson, 2003).

Sexton, Yeo, Turner, and Hockey (2004) described user feedback in an open-source tool, created in the LEADERS project, for creating digital representations of archival documents. They argue that when developing new technologies, as in the case of an online application, it is valuable to understand the end users which in this study were users of archive repositories in the UK. A segmentation model was used to categorize and gain knowledge of these end users. This consisted of a questionnaire regarding their use, professional, educational, or leisure, research interests, the experience of using finding aids, and their experience of the web for archival-related work. With this toolkit, a new customized application with actual user preferences, user behavior, and needs, could be created (Sexton et al., 2004). According to Yeo (2005), contemporary knowledge of a known user may contribute to the prediction of user patterns of future users. The author presented market segmentation for the archives and records management profession to gain knowledge and understanding of their users. Yeo (2005) argues that no single generic user exists, and segmentation can be used to establish categories of users and their behavior, which could be measurable and identifiable. There are several varieties of segmentation studies, and Yeo discusses demographic segmentation, which consists of

variables such as geography and location, as well as sociological variables (e.g., sex, age, and social class), and subjective variables, such as computer competence, as something valuable to conduct. Yeo (2005) highlights the different roles of users when searching records in different locations, and how the context of use affects behavior and need. The behavior and needs of an individual user may vary depending on whether it is in the role of an internal user at a university department, or an external user at an unfamiliar institution (Yeo, 2005).

Considerations of user needs are also seen in studies that focus on satisfying the needs of a specific group of users, other than common archive users. Jones and O'Neill (2014) focus on the need and value of archival records for a specific community in Australia. Through a digital resource, "Find & Connect", the writers explore the needs of Forgotten Australians and Former Child Migrants, described as a specific community. Records within archives, national, state, or organizational, are of great value to this community of people who spent their childhood in institutions. The problem that the writers illustrate is the accessibility of these records connected to the need that this group of users has and the responsibility that the archives and the archivists have when facing these needs. As a result of the development of the web resource, the aim of the archives and archivists should be to consider three aspects of development: perception, practice, and principles. With a proactive approach, records should be evaluated by their importance "to diverse communities inside and outside the organization in question" (Jones & O'Neill, 2014, p. 121). The public use and need must be elucidated and consultation with different communities should affect the archives' and the archivists' practices. In the specific case where records are spread between different locations, with different customs and use of language, the writers argue that the archives and archivists must be aware of their audience (Jones & O'Neill, 2014). This awareness was also highlighted by Cox (2008), as important, however, to be aware of the needs of the specific audience in mind may be one thing, but to predict the future needs of an audience that is currently unknown is another.

Valuing how records might be used in the future is a difficult task and to give a wider understanding of the use of records, Sundqvist (2015) analyzed theoretical conceptualizations of use. Within the context of growing technological advancement, new groups of users are increasing with new demands for access to use records. In the study, based on two case studies, Sundqvist (2015) identified different dimensions of the use of records. The use of records is difficult to disentangle and is described as poly-dimensional. As a result, Sundqvist developed a conceptual model of use where the use of records addressed different aspects of user behavior. According to Sundqvist, the value of a record is difficult to anticipate since records "are created for certain reasons, kept for other reasons, and used for various reasons" (Sundqvist, 2015, p. 2). In a discussion of user needs, Sundqvist (2015) highlights research arguing that the motives for information seeking and use are basic cognitive and psychological needs, which points to a more individual perspective rather than contextual and social aspects of need. However, Sundqvist (2015) argues that records will be used when there is a need, and an individual need could also originate from a social need.

Other scholars who focus on the importance of bringing user needs into the light are Vilar and Šauperl (2017). In the context of the development of digital archival collections, the authors conducted interviews and surveys with archivists of public archives in Slovenia and Bosnia and Herzegovina. By including the user needs, the authors created a user profile, a student user named Amar. According to a literature review performed by the authors, user studies on archives users are not common in archival theory and practice. In comparison with library and information science, the writers argue that there is a lack of knowledge about the typical archive user (Vilar & Šauperl, 2017). The creation of the user profile was based on the information search process model of Kuhlthau (1993), which consists of six stages: 'task initiation, topic selection, prefocus exploration, formulation, collection, and search closure'. This process also consists of three realms: "affective-feelings; cognitive-thoughts,

and physical-actions". In this study, the creation of the profile was also based on Johnsons' (2008) contextual interaction model, consisting of three forms of knowledge: domain knowledge, artefactual literacy, and archival intelligence. The user profile Amar is a history student, described as an inexperienced archive user, who finds the physical archive frustrating, is unable to understand how to use primary sources and relies on the advice of the archivists. According to the authors, this raises the importance of the archivist's role as an educator and user education (Vilar & Šauperl, 2017). The purpose was to create a user profile based on the perceptions and imaginations of the archivist's view of a typical user rather than the perception of users. In interviews with archivists, the respondents described users' characteristics, competencies, user behavior et cetera. As mentioned above, Jones and O'Neill (2014) argue that there are three aspects that the archival domain should consider in the development of different web resources: perception, practice, and principles. In this study by Vilar & Šauperl (2017), the perception was highlighted as significant in the creation of the user profile, however, based on the perception of the archivist rather than the perception of the user.

Kärberg (2014) also highlighted the perception of users in the context of archive user profiling. According to Kärberg "perception of information is always influenced by the receiver's knowledge base" and since "archival users have different knowledge bases, they may not reach the same understanding from the information" (Kärberg, 2014, p. 126-127). Kärberg used Piwik, a web-analytic tool (WA), to create a user profile in the context of defining a designated community (DC). A designated community, a central focus in the Open Archival Information System (OAIS) model, is defined as: "an identified group of potential Consumers, who should be able to understand a particular set of information. (CCSDS, 2012, p.1-11). The author defines knowledge through where it resides and divides it into two parts: digital codified knowledge, which resides in archives and users' systems and is organized with related links and contexts, and know-how-knowledge gained through experience, tacit knowledge that is difficult to share. By defining a DC where potential consumers are provided with understandable sets of information, the OAIS approaches these different knowledge parts. When creating a DC there is a need to define the users, and Kärberg studied three user group profiles: primary, secondary, and tertiary user groups. This method highlights questions such as which parts of the website are most used and most popular, and how the website is reached and navigated. According to Kärberg (2014), WA in archive user profiling is seldom used but may assist in defining who the real DC is.

Discussions on whether archives, archival institutions, archival functions et cetera should be based on the perception of the users or the archivist's perception of the users have been recognized in the literature. As Morton (2015) discusses, it is common, in the development of digital finding aids or collections, that it is the archival professions' perceptions of user needs that are in focus and they are seldom based on systematic research about the users' actual requirements and needs. In the thesis, Morton (2015) explored user preference for archival presentation in the context of the collections of the Plumas County Museum in northern California. The aim was to develop a custom-built website, an online archive to contribute knowledge about user preference in small archives. A variety of different users with different backgrounds such as community members, museum stakeholders, scholarly researchers, and genealogists tested the website and contributed feedback on its usefulness. As small archives were in focus in the study, Morton (2015) discusses that archival user evaluation studies are often performed by large institutions, and the researchers are often connected to the institutions where the studies are carried out. The study shows that even though local and small digital collections attract users in the nearby surroundings, the digitalization of different collections per se may increase their use and attract other users (Morton, 2015).

Summary – Theme 3

The third theme Searching for an understanding of a user regarded articles that explored studies of specific users in different contexts. Previous research has raised the importance of having a

systematic approach to gaining knowledge about users rather than an impressionistic approach. Previous research has also pointed out the need to study the different contexts of use. How users use and search information has been highlighted in different user studies to enhance accessibility for specific known users. Different methods are used to gain an understanding of user perception and to categorize the users and their need to use.

Discussion

The creation of the three different themes that were identified in the articles reveals how many and how different the contexts are when studying the concept of users and use. In the various studies examined, several articles elucidated the ongoing and ever-increasing demand for access to archival material. A reoccurring theme and recommendation were that the archives and archivists must gain awareness of not just their known audience but also the future need of a future audience.

This literature review shows that there is still a need to better understand the retrieval needs of users, who they are, and how they interact in different areas in the archival domain regarding archival finding aids, creation of interfaces, archival description et cetera. Yet, it is also a matter of perspectives, to become more user-oriented, as in the example of the creation of archival finding aids. The question is if it should be based on the needs and values of the users or be based on the knowledge, experience, and predictions of what the archival domain believes the users need or will need in the future. Or perhaps a combination but with an infrastructure of users' context when archives become more based on the needs of specific user groups.

In this review, several articles emphasize that there is a need to know who the users are and how these users interact with different archival functions or systems. Several articles also emphasize that this knowledge is lacking. When surfing on the technical wave of bringing new technological solutions to the archival environment the words of Cox (2008) still echo in the background: "[...] we need to know that this is a different environment and archivists need to be willing to develop new skills and test new approaches".

Participatory approaches are increasing in different parts of the archival domain and can be seen as one way to reduce the gap between the archive and the users. Engvall (2019) discusses the participatory approaches within the creation of recordkeeping systems and emphasizes that they should be considered early in the creation process. Huvila (2008) argues that participatory approaches may increase transparency since participants possess different viewpoints, interpretations, arguments, and counterarguments. However, as Engvall (2019) points out, a participatory approach may involve new challenges because of these different viewpoints and interpretations of users, and it may consist of dominating values and roles of the participants and the question is: "who should influence what, in what way and for what reason?".

The elucidation of user needs and the development of the participatory approach within the archival domain can be interpreted as a response to the introductory question of this paper, which Hedstrom posed in 2002: "Should our interfaces reinforce archivists' perspectives on what constitutes an archives or should we enable users to construct their own notions of archives based on the needs or values that matter most to them?" (Hedstrom, 2002, p. 42). The question was raised in the context of the development of archival interfaces, however, in this sentence interfaces could be replaced with digital archives or finding aids instead since the core of the question is something that many of these studies struggle with: whose perspective should dominate and on what level?

The quest to understand users is complex and the needs of users are often diverse. User studies conducted in researchers' archival institutions may show different user needs and behaviors than approaching other institutions and are therefore based on the context of use (Yeo, 2005). According

to this literature review, a user is a heterogeneous and highly contextual concept. When Cox (1998) emphasizes that the electronic world of media should be considered as a different environment, this new world has also given new perspectives about the user. A user is something or someone that can be measured; it can also be a participant, a role that with different levels of intervention aims to influence the design of different solutions. In a user study of archival interfaces, the user is not a user of the archive itself but a user of the presentation on the interface.

User studies may aim at depicting the cognition of the user, the perception of a user, the needs of a user, and how a user uses archival records to create accessible interfaces or archival finding aids. These user studies may result in archival records being valued from the perspective of the users. As Sundqvist argues, the values of records are difficult to predict since there may be different reasons why they are created, preserved, or used (Sundqvist, 2015). According to this literature review, studies on users and use are highly bound to contexts, which may be an obvious conclusion, but future studies within the field of archival knowledge would benefit from considering and raising the question of whether there is a way to view and study users and use that is not that strongly bound to context. The value of records is, as Sundqvist (2015) argues, connected to how they are used, and in the context of user studies with participatory approaches, does this illustration of the user perspective not ascribe value as well? The light shed upon the perception or cognition of a user points to a more individual perspective of use and with the words of Hedstrom (2002) in mind, how will this individual perspective affect the ability to value information of what will be accessible in the future?

Conclusion

This paper aimed to explore how existing literature in three different databases deals with the concept of users and their requirements when using archival material, and who a user in the archival context might be. The creation of the three identified themes, as a result of this literature review, shows that users are described in varying contexts and from different perspectives. Users are also described as something that we need to gain more knowledge of regarding their needs, behavior, and perception from different perspectives in different contexts. Participatory approaches are increasing and can be seen as one way to reduce the gap between the archive and the users. As discussed above, a user is a heterogeneous and highly contextual concept and can be something or someone that can be measured: a participant, and a co-creator.

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