Assessing User Requirements for e-Resources Interface Design in University Libraries

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Abstract—e-Resources in the university library as learning resources are one of the primary services that promote learning and research to improve university productivity. At present, users find it difficult to access e-resources and require assistance in finding them. When using the system, users felt frustrated, confused, and lost. The e-resources services system on library websites, on the other hand, lacks sociability and a sense of human warmth. Sociability and a sense of human warmth can be integrated into the website interface, which may evoke the sensation of being with an actual individual, even if the service is provided online. This study investigated the social presence aspects that can be implemented in the library's e-resources system. The purpose of this study is to elicit social presence features that can be implemented in the design of e-resource interfaces on library websites. The methods used in this study are in three phases: a) web content analysis from twelve university library interfaces designed in several countries; b) interviews with library staff; and c) assessment by a questionnaire of library website users. Website content analysis was used to investigate elements that offer many unique features to support the implementation of social presence through the e-resources interface. An interview was used to validate elements that were found in the web content analysis, and a questionnaire phase was used to assess the user requirements for these social presence elements. The results of empirical studies show that users need some elements of social presence, such as comments, chat, ratings, voice, personalized welcome in library accounts, tools, preference language, links for reference managers, and social media, as well as ease of access such as readable help font, color, and font size.

Keywords—*User requirement; interface design; e-resources; social presence; university library; element*

I. INTRODUCTION

e-Resources in the library websites prefer to provide authentic learning with social interaction [1], and a user interface is a communication tool for the user with the e-resources system in the library websites. As one of the official sources of information, which is one of the services on the library website, are often requested to meet a user's needs quickly, which was found to be frustrating [2], boring [3], confusing [4], and feeling lost [5]. It is because the design interface of e-resources has unclear navigation [6] with the searching interface of e-resources [7] and with too much information [8]. This makes it hard for users to find information [9] [10]. Users feel difficulty in accessing the system and understanding the system navigation [5], added to a lack of a guide and the absence of some websites [11]. The other reason that causes frustration for the user is a slow

internet network [12] [13] [14], low bandwidth [15], slow download [16], and limited power [17]. All these reasons make a lack of time [18] with high access costs [19], lack of authority, and also limited subscription titles [20], which makes the low use [21] of e-resource systems in libraries.

However, the provision of user interface designs in e-resources services needs to be addressed more [22], to sustain the use of e-resources especially in the university library systems [23] [3]. Among them is navigation on the interface that needs to be clarified and made easier to identify and access complex systems. Meanwhile, the e-resources in the university library is the primary source of information obtained by students and the academic community. [24] [25] believes that e-resources are the main gateway that provides users with the information needed to conduct investigations in various fields. University e-resources are the main part of the library websites and have become a vital academic resource that supports teaching, learning, and research activities [26]. e-Resources play an essential role as a source of information in providing quick and easy service to readers [13]. In contrast, librarians [27] play a role in facilitating the discovery and access to information resources.

The challenge here is, firstly, that e-resources interfaces lack elements of social activity or human-friendly treatment from face-to-face or online service experience [28] [29], which causes users to feel confused, and frustrated and to resolve the problems encountered themselves [30]. Studies by [31] and [32] found that 87.2 % of users expect multiple database searches to be available on one interface. Most users prefer or tend to use open-access journals as opposed to journals that need to be subscribed to [33] [34]. In addition, when users do not get answers to their questions and there is no help in the system, users will solve their difficulties while using the system and spend a long time solving the problems encountered. Users feel depressed and frustrated because users do not get treated with face-to-face services.

Secondly, the system is less friendly. The cognitive and affective issues faced by these users are due to the lack of information about the social elements on the system interface [35] [36]. This indicates that the current system does not emphasize or integrate elements that evoke a sense of social presence through their system interfaces. Previous studies suggest social cues such as voice, picture, or video [37], and greetings influence cognitive and affective elements [38] [36]. The use of social elements in a system is referred to as social presence [39]. Using the elements or characteristics of social activities can reduce users' negative experiences using the

system [40]. Therefore, a sociable and human warmth user interface is needed to make users engage with the e-resource system in the library.

Thirdly, e-resources are all digital collections that can be the main reference for students and lecturers to improve knowledge, education quality, and university performance. Based on the results of previous studies, it is known that the use of these e-resources is low [41] [42] [43]. The cause is the absence of sociability and human warmth in this interface system. Because of that, users turn to ordinary search engines because they feel comfortable with them compared to using e-resources in libraries. Users prefer to do searches or get information on standard search engines [20]. Although library initiatives provide other mobile application libraries [44], the usage is still at a low stage [24]. Meanwhile, the system's performance makes it easier [45] for anyone to access information and receive service.

Fourthly, social and technological factors help increase the use of learning systems [46]. Social activities in this system include greetings [28] [47], chats [48] [49], and images [50] [51]. According to [52], presenting elements of social activity in the system will influence users to engage in the cognitive and effective use of e-resources. Although studies on the use of e-resources in libraries have been carried out by many researchers [2] [53] studies that focus on social presence in e-resources interface design are limited. Therefore, analyzing social presence elements on the interface of the system or pages in the library is a critical issue to be investigated to see the benefits that can be provided in the environment. Previous studies show that social presence was applied to e-learning, e-commerce, and e-services. The concept of social presence can even connect users with technology in a fun way.

Based on the above, this study aims to investigate the element of social presence to be applied and incorporated into the e-resources interface design in the university libraries. Investigation of this element is needed to suit users' needs for e-resources which are undoubtedly different from users' needs in e-commerce or e-learning. The research question in this study are:

1) What elements are needed for the university library's e-resources interface design?

2) How to assess these elements to meet the user requirement for e-resources interface design in the university library?

To achieve this, this study has designed a three-phased method approach. Firstly, this study finds elements from the literature reviews and searches for some elements from web content analysis. Secondly, this study validates all elements from the first phase by trying the element's function and also conducting an interview session with some librarians from these libraries. Thirdly, this study assesses that element to find user requirements through a survey. This investigation can develop new elements needed in designing an e-resource interface in university libraries by completing this phase.

The results of this research reveal the user requirements of e-resources service interface design in university libraries. The scope and contribution of this research consists of two main areas, namely human-computer interaction and libraries. The structure of this article is as follows: an introduction in Section I to the issues of e-resource usage, followed by an explanation of related work in Section II, methodology in Section III and the result of the user requirement in Section IV. Finally discussion and conclusion is mentioned in Section V and Section VI respectively.

II. LITERATURE REVIEW

This study explores research in the areas of accessibility of e-resources and social presence. This study summarizes the literature and presents it in a literature review.

A. Accessibility of e-Resources

Accessibility of e-resources refers to the use of e-resources subscribed by the library by all users to access the information and services provided through the website [45]. This accessibility describes the extent to which resources, services, and products are accessible to the users [54] who utilize them or the ability to access information stored by the operator by minimizing any distance and cost barriers by using a user interface. Accessibility determines the speed of the output of information that can be accessed in any format [55]. Access to information is essential in determining successful and practical research in universities. Factors that influence the access and use of electronic information resources in university libraries are:

1) Literacy in obtaining information is of paramount importance in quality research. Literacy helps users access and use relevant information. Most users need these skills, which causes them to spend more time retrieving the necessary information. These skills include knowledge of database structure, appropriate and available search terms, and an understanding of how the commands are linked to each other.

2) Consumer attitude towards electronic information sources. A previous study in [3] found that lecturers prefer electronic information sources to printed ones. Electronic information sources require less time to access such information sources than printed information materials.

3) Access and use of electronic information resources. Research results show that electronic information resources are still low even if accessed using library computers or remote access [56]. It is common knowledge that there are various benefits of using e-resources, namely: (1) Access to a broader collection of information, (2) Faster access to information, (3) Increased Academic Performance, (4) Access to quality information, (5) Access to the latest information and (6) Easier access to information.

The challenge of using e-resources in libraries is that it takes much time to find the materials needed [57] and it is not easy to access. This finding can be attributed to inaccessible web design [58], low level of literacy in using e-resources, lack of knowledge in using assistive technology, and lack of motivation, which may be due to the above factors.

B. *Social Presence*

Social presence is a concept that has its roots in telecommunication literature. The study of Short, Williams, and Christi developed the social presence theory as a model to analyze socio-psychological dimensions of mediated communication from the perspective of social cues [50] [48]. They defined social presence as the degree of excellence of others in interactions and the importance of impressions of interpersonal relationships.

Social presence is a person's mental state to feel close to others in a virtual environment [59] [60]. At the same time, social presence can also be defined as a person's participation as a real person in expressing self and social emotions through communicative media [61] [62]. A person can tap into a high level of social presence, escape from the real world, and enter an exhilarating and pleasurable mental state through intimate interactions with other users. With a high social presence, a person tends to feel more satisfied and comfortable using the system. Someone with a strong social presence in the social networking gets a more extraordinary experience. A strong sense of excitement helps users enter an exhilarating mental state when using something they enjoy. In another study, belongingness [60] was positively related to well-being embodied by happiness and pleasure.

Short stated that social presence contributes to the medium of communication. Social presence has a complex structure, like the participation of someone as a real person in expressing himself and their emotions through communicative media [62]. Social presence is a construct consisting of two concepts: intimacy and immediacy. Intimacy is a sense of closeness one builds to another through verbal and non-verbal cues. Whereas; immediacy is the frequency of reactions and interactions of a person willing to support and share experiences with others. [63] [30] state that if someone in a system demonstrates these two concepts it can increase social presence.

Social presence is a theory that has its foundation in telecommunications literature. Short, Williams, and Christi developed social presence theory as a model for analyzing the socio-psychological dimensions of mediated communication from the perspective of emerging social activities [50] [63]. They define social presence as a person's level of superiority when interacting and the impact of those interpersonal relationships. Moreover, according to [64], intimacy in communication media is influenced by physical distance, eye contact, smiles, and personal topics of conversation.

The following are the elements of social presence obtained from a literature review (see Table I).

TABLE I. SOCIAL PRESENCE ELEMENT FROM A LITERATURE REVIEW

Author	Social Presence elements
S. S. Engku Alwi and T. S. M. Tengku Wook	1) Services: Communication with retailers, Feedback/ Comments, Frequently Asked Questions, Chat. 2) Display: Language choices, Advertising. 3) Website content: Photos, Animation, Audio, Video, Automotive description, Product description. 4) Additional applications: Recommender system, Rating, User review [65]

Author	Social Presence elements
Thabet dan Zghal	Website data, human photos, personal responses, animations, virtual agents, frequently asked questions (FAQ), instant messaging, entries, discussion forums, and social networks.
Papadopoulou and Ganguly et al.	Images, colors, and graphics
Y. Li and Y. Xie	Visuals (images and colors) [66]
Y. J. Kang and W. J. Lee	Avatar [67], animated gif, username, greeting [28]
W. Nadeem et al.	Comments, ratings, exchange options, and tagging [68].
J. Wei et al.	Communication support (i.e., text chat and voice chat) and shared navigation (i.e., page push) [60]

Based on Table I, it can be seen that the social presence elements that can be applied in designing the electronic resource interface on the university library website include: communication with library staff, chat, language choice, photo, and greeting, welcoming users by name, text chat, and emoticons.

III. METHODS

This research method through three phases (see Fig. 1). The primary purpose of this article is to identify social presence elements for the e-resources interface in the university library. This study reported empirical findings in peer-reviewed journals from 2015 to 2021. The Scopus database was used to search for relevant studies. The keywords and word combinations are "social presence" and "social presence and e-resources". Only studies published in the English language were reviewed. A two-technique literature search strategy [65] was used in this study to retrieve social presence elements for the university`s library interface. The Technique I used to identify unique elements of social presence from literature review and web content analysis in twelve universities' library interfaces (see Table II). Website content analysis [66] was used to investigate elements that offer many unique features to support the implementation of social presence through the e-resources website interface.

TABLE II. NAME OF UNIVERSITY LIBRARY

No	Country	Library Name
1	Australia	Queensland University Library
2	England	Lancaster University Library
3	England	Lincoln University Library
4	Germany	Gothe Universitat Library
5	Japan	Hokkaido University Library
6	Japan	Osaka University Library
7	Malaysia	Tun Seri Lanang Library
8	Netherland	Radboud University Library
9	Netherland	University of Groningen Library
10	Taiwan	National Chang Kung University Library
11	USA	Arizona State University Library
12	USA	Louisiana State University Library

Furthermore, Technique II is used to communicate with five library staff to validate the implementation of social presence elements in the library interface. In this activity, the online interview method was conducted with the library staff hosting a live chat on the library's web. Before that, the researchers introduced themselves and tried to inquire about the e-resources services at the library. Researchers tried to use elements provided in the live chat interface, such as emoticons, attachments, and pictures. Throughout the interview session, the researchers recorded chat recordings through this text. At the end of the interview session, the researcher also had a brief discussion with the staff to improve the information obtained during the interview session. Data obtained from interviews and chat recordings will be analyzed by coordinated based on web content analysis. In this technique, the researchers met online with five university library staff, namely Lancaster library staff, Lincoln Library staff, Radboud Library staff, Tun Seri Lanang Library staff, and Queensland Library staff.

Technique III assesses the need for social presence elements in library users. This activity aimed to validate the social presence element on the e-resources interface in the university library. This test was used to assess social presence elements by comparing elements found from phase I. Then, unique elements identified in the literature review phase were cross-checked with observational results from web content analysis. It was found that the elements searched with library reviews were similar to the search results of social presence elements in web content analysis. There were some additional new elements found after web content analysis was conducted. The findings of social presence elements for e-resources in the university library interface (see Table IV) were then tested with a questionnaire (see Table V). The survey method was performed with 44 users of the e-resources interface in the university library [67] via a google form. The output from this analysis phase is an element of social presence in the design of e-resources interfaces and will be used to design prototypes in the next phase.
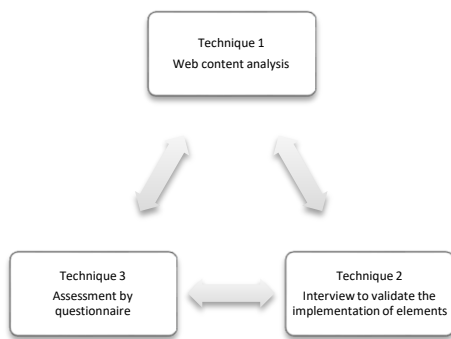

Fig. 1. Research methodology.

The three phases used in this study are known as triangulations. This study does not rely on a single source and instead uses a systematic search approach, web content analysis by looking at implemented social presence elements, and interviews with library staff to validate the function of social presence elements in university libraries. Finally, a questionnaire was used to collect data on user requirements.

IV. RESULTS

A. What Elements are Needed for the University Library's e-resources Interface Design?

To answer this question, this study conducted a literature review and web content analysis to answer this question.

1) The need for social presence elements on the interface of e-resources through a literature review: Analysis of the need for elements of social presence on the interface of e-resources is obtained through two stages: literature review and cross-checking through web content analysis of university libraries. As a result of the literature review, the list of elements of social presence was found as follows (see Table III: Table of elements of social presence).

TABLE III. SOCIAL PRESENCE ELEMENTS

No	Elements
1	Human picture [69]
2	Text [69]
3	Personalized greetings [65]
4	Frequently Asked Questions[65]
5	Instant message [65]
6	Chat [69]
7	Social Networks [65]
8	Product Description [65]
9	Emoticon [69]
10	Colors (Lee et al. 2010)
11	Interaction functions [69]
12	Languages [65]
13	Videos [65]
14	Tag [68]
15	Website data [65]
16	Animation [65]
17	Virtual Agents [65]
18	Number of entries [65]
19	Discussion Forums [65]
20	Graphics [69]
21	Comments [65]
22	Advertisements [65]
23	Ranking [68]
24	User reviews [68]
25	Voice chat [60]
26	Share [28]
27	Avatar [28]
28	Ratings [68]
29	Recommendation system [65]

2) Web content analysis: The stage used in this method is, firstly: surveying whether the design of the university library interface possessed the characteristics or elements of social presence as mentioned in the literature review. Further observations were made to observe the social presence element in the design of the e-resources interface of university libraries from several countries. Then, a web content analysis

method [68] was performed to obtain more detailed data related to the need for social presence elements in the design of e-resources interfaces in university libraries.

Based on the study, it is known that out of the twelve university library interface designs that have been observed, only seven libraries have social presence element features namely Lancaster University Library, Lincoln University Library, NCKU library, Radboud University Library, the Tun Seri Lanang Library, the University of Queensland Library, and the Arizona State University Library. Based on web content analysis observation, some elements are found in this method (see Table IV).

TABLE IV.   SOCIAL PRESENCE ELEMENTS BASED ON WEB CONTENT ANALYSIS

No	Elements
1	Notification
2	Library account
3	Application/Request
4	Link on reference management
5	Orchid account link
6	Submit an article
7	Publisher chat
8	Pay
9	Forum Group
10	Disabled
11	One search
12	Download history
13	Altmetrics
14	Language
15	Tools
16	Order
17	Borrow
18	Delivery
19	Drive-thru
20	Library Guide
21	Gift
22	Promotion
23	Events
24	Digital library card
25	Attachment
26	Reading list

Then, the following sections will describe the role of each group of social presence elements and their constituent sub-elements in the e-resources interface design in the university library. Table V describe the four main social presence elements suggested to be critical for e-resources in the university's library interface design are live chat by adding video to create more of a presence and impression, and Library account by adding elements: like, share, rating, and pay. Links to reference manager links to discussion forums to share experiences, links to social media, and links for Accessibility. Table V presents a categorization and description of the identified groups of social presence elements and their constituting sub-elements.

TABLE V.   SOCIAL PRESENCE ELEMENTS SUGGESTED FOR E-RESOURCES IN THE UNIVERSITY`S LIBRARY INTERFACE DESIGN

Main element	Sub-element
Live Chat	Human Picture, Text, Chat, Emoticon, Interaction Function, Video, Voice, Virtual Agent, Comment, User Review, Share, Rating, Like, Attachment.
Library Account	Personalized Wellcome, Notification, FAQ, Order Now, User Request, Language Choice, Recommender System, Charges, Read/ Download History, Tool, Booking Collection, Delivery Service, Drive Thru, Library Guide, Gift, Event, Digital Library Card.
Links	Social Network, Discussion Forum, Reference Manager, Orcid.
Accessibility	Font Size, Keyboard Navigation, Readable Font, Color

Furthermore, based on the results of observation and analysis of web content, the role of each group of social presence elements and its constituent sub-elements in the design of e-resources interfaces in university libraries are:

a) Live chat, a finding in the literature review where this critical element is one of the indicators of the existence of social activities that indicate a social presence in a system. Libraries initially used this live chat to make it easier for users to obtain referral services. Live chat services are unique to human nature [69] and have positive word-of-mouth effects [70] and things that support live communication to get help from library staff. So, the elements for live chat are chat, staff name, staff photo, voice, text, emoticons, help, and video, adding video to create more impressions of presence. This element is used to meet and communicate with staff or librarians to get services directly. That way, users expect face-to-face service even if the service is online.

b) A library account that is trustworthy and easy to manage includes various personal information, activities, and daily tasks of library users like user accounts, personalized responses, digital library cards, orders, charges, delivery services, driveways, and download history. This element is used to manage users' personal needs in e-resources services in university libraries by adding user accounts, personalized responses, digital library cards, collection ordering services, late billing, charges, drive-through services, delivery services, download history, recommender system [71], QR, like, share, rating, pay and cart. Users can share videos of new findings from research, experimental videos, videos of researcher observations, and photos of research results. This element of sharing will encourage users to engage [72] in e-resources services at the library.

c) Links are used to improve system performance and make it easier for library users to connect to various networks that support the work of library users. Those elements are links to orcids, referral managers, forum discussions to share experiences, and links to social media.

d) Accessibility is things that make it easier for people with disabilities to access e-resources services. Interface design [73] is essential to consider accessing information created by social and environmental contexts.

With live chat elements, library accounts, links, and accessibility, the e-resources interface in the university library is expected to be fun and convenient for users. Fun and convenience will increase the use of e-resources, and as a result, university performance will increase. Users with disabilities will also find it easier to use e-resources in the library. Users will feel comfortable, happy, and engaged with this service so that the cognitive and affective issues of users when using the interface in the library will be resolved.

3) Interviews: This method is used to ensure that the social presence elements found in the design of the university library interface work well. For that, the researchers try to use these elements to validate the implementation of social presence elements in the library interface.

Based on interviews conducted at the Lancaster library with staff on duty, it was found that the chat element in the Lancaster library had elements of staff names, text, and voice but still needed elements of library staff photos, emoticons, and videos.

In the Lincoln library, there are elements of staff names and text. In contrast, in the Radbud library, there are elements of librarian pictures, voices, attachments, and emoticons on this chat element. Besides that, in Queensland libraries, there are elements of staff names and text.

Based on these interviews, a social presence element in the design of e-resources interfaces in university libraries still needs to be improved. Therefore, in this study, we will further design e-resources interfaces according to data acquisition from library reviews and web content analysis.

B. Assessment of the Elements of Social Presence based on user Requirement

The assessment aims to validate the social presence element in the design of the e-resources interface in the university library. This assessment uses a questionnaire with a seven Likert scale to getting more detailed answers from respondents.

Based on the assessment results with the questionnaire, it is known that respondents of this assessment are 43% male and 57% female. Based on their occupations, it is known that 11% are lecturers, 86% are students, and 2% are research assistants. Meanwhile, their level of studies is 45% bachelor, 16% master and 39% Ph.D (see Table VI).

Moreover, based on the respondent's country (see Fig. 2), it is seen that 50% are from Iraq, 14% from Malaysia and Indonesia, 5% from Taiwan, the UK, Libya, and 2% from Thailand, Palestine, Singapore, and Yemen.

Based on the questionnaire results about live chat elements (see Fig. 3), it is known that users need comment element as

much as 28.75%, rating element as much as 27.5%, chat element and text element as much as 23.75% and voice element as much as 22.5%.

Based on the study about library account elements (see Fig. 4), it is known that users need a library account element as much as 32.5% for a language choice element, 27.5% for personalized welcome element and tool element.

Based on this study about link elements (see Fig. 5), it is known that users need link elements as much as 27.5% for discussion forum elements, 26.25% for reference manager and orcid link elements. In comparison, users also need social network elements as much as 21.25%.

Based on the study about accessibility (see Fig. 6) , it is known that users need accessibility elements as much as 31.25% for readable font elements, 27.5% for color element, 26.25% for font size elements, and 25% for keyboard navigation.

TABLE VI. RESPONDENT`S DATA

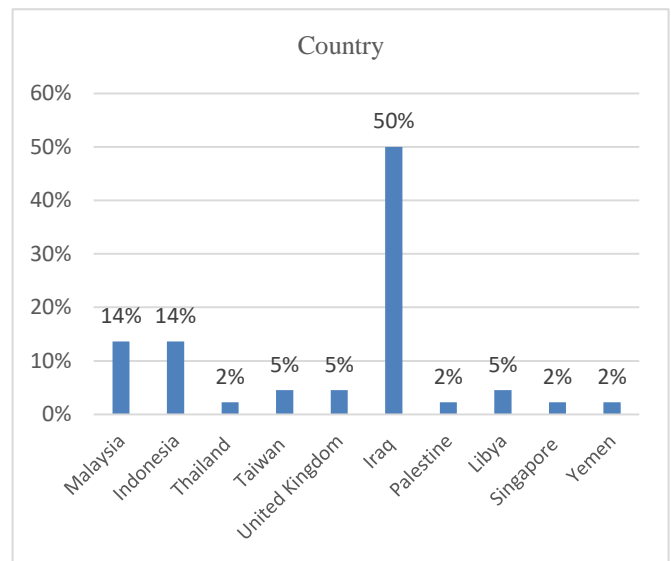|	Category	Frequency (n=44)	Percent (%)
Gender	Male	19	43
	Female	25	57
Occupation	Lecturer	5	11
	Student	38	86
	Research Assistant	1	2
Level of study	Bachelor	20	45
	Master	7	16
	Ph.D	17	39

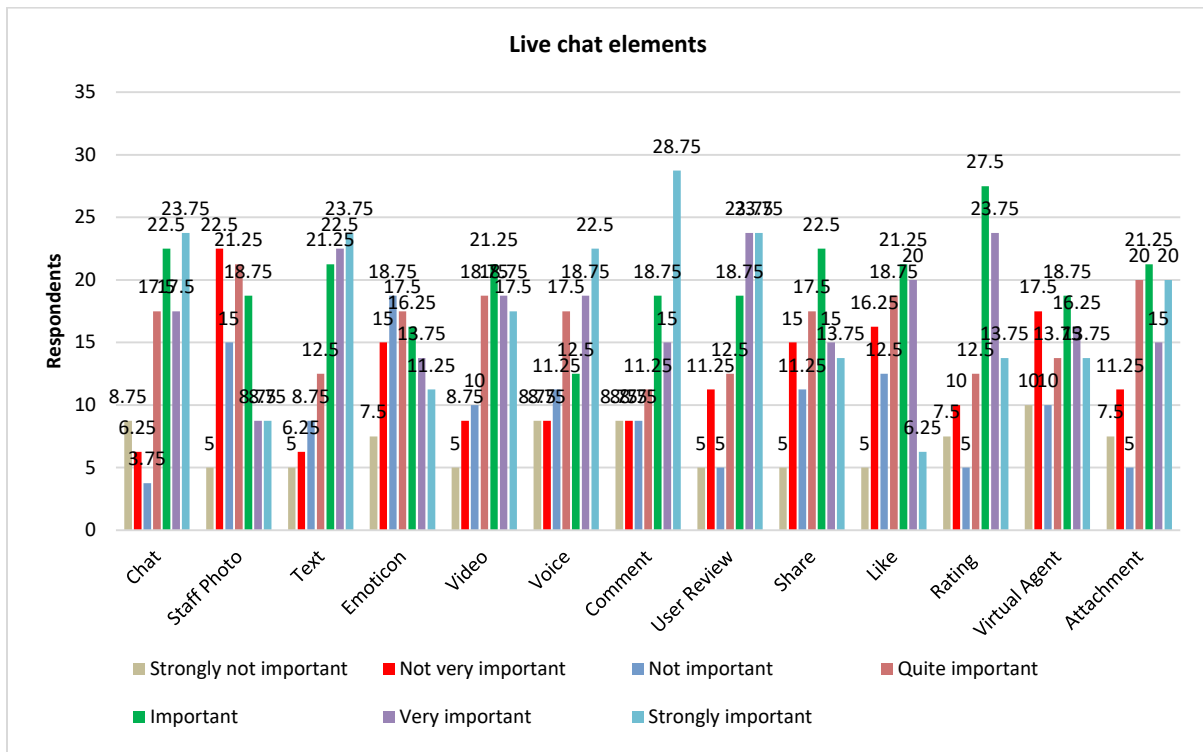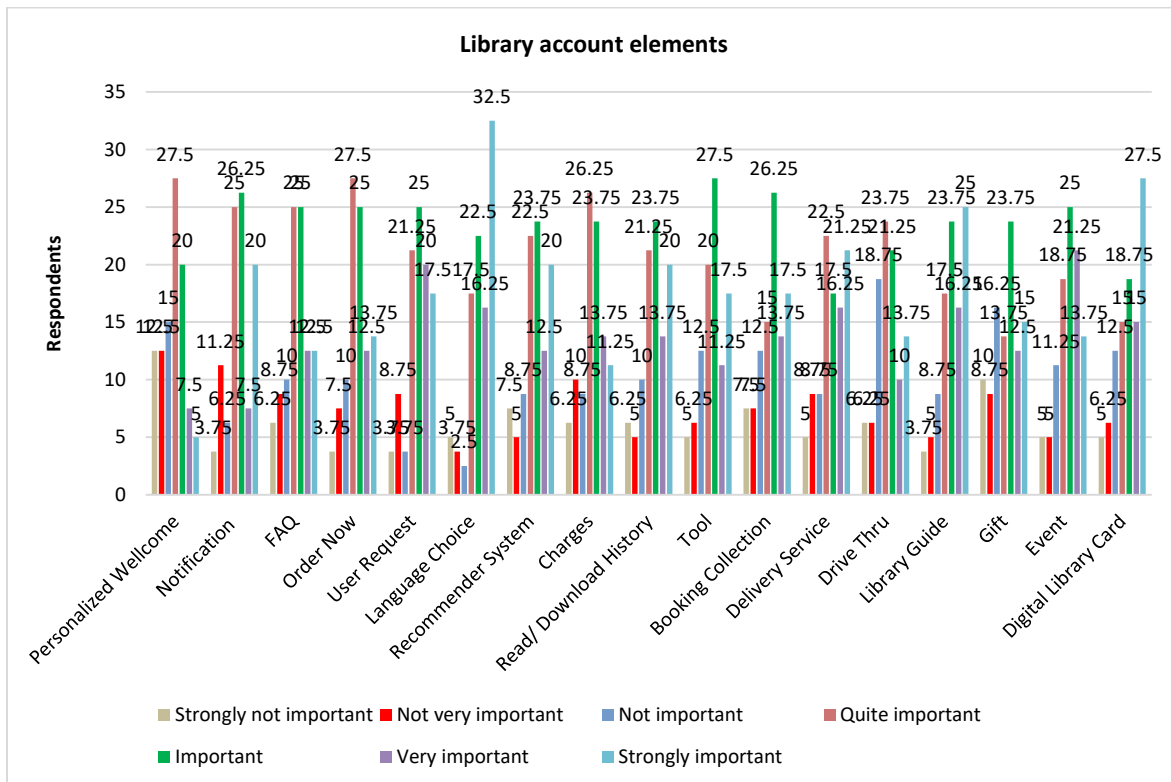Fig. 2. Respondent's country.

Fig. 3. Live Chat elements.
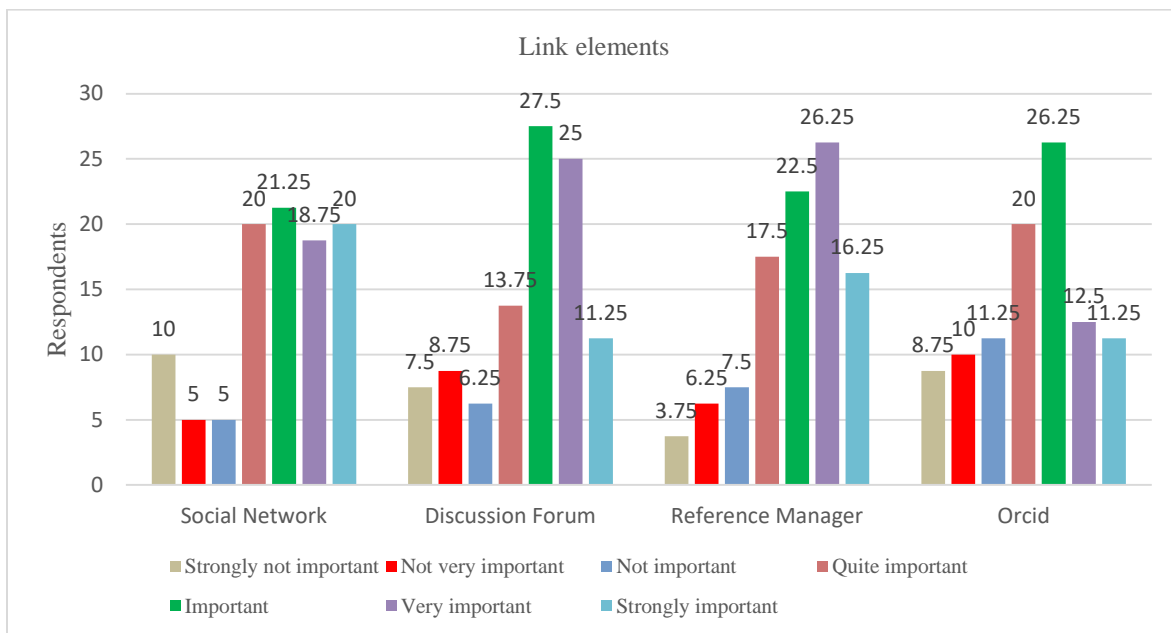

Fig. 4. Library account elements.
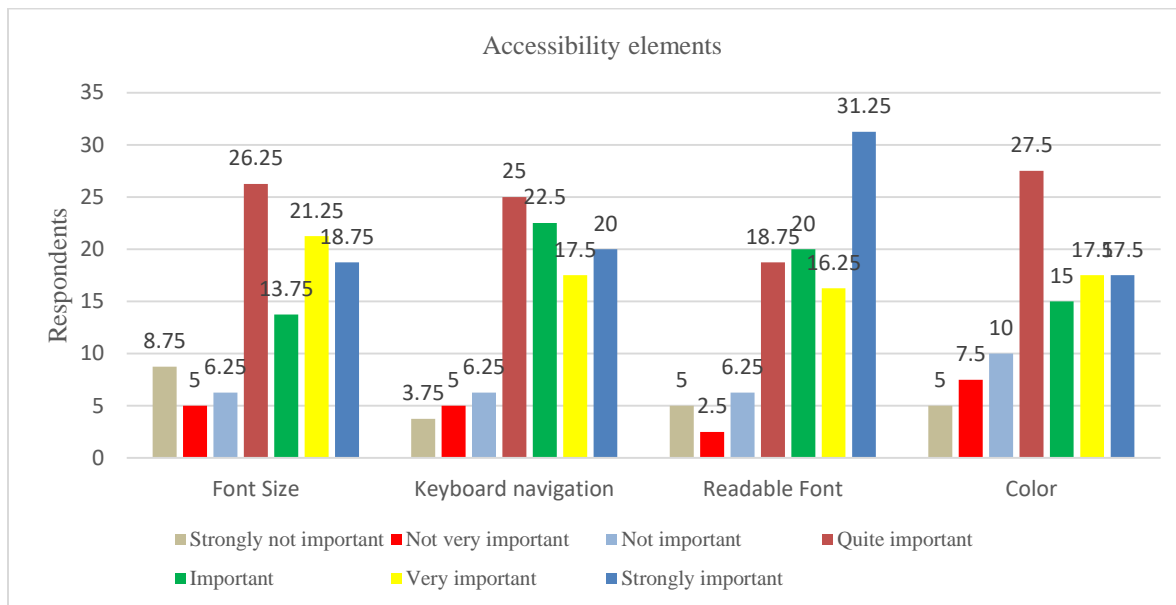
Fig. 5.   Link elements.

Fig. 6.   Accessibility elements.

V. DISCUSSION

This study has looked into twelve university library interfaces in several countries, and the result is that seven of these libraries have an element of social presence. Social presence elements were obtained from a literature review, library interface observations, and observations on electronic commerce. This element in electronic commerce was taken with the consideration that it could be a new element in the design of the e-resources interface in the library.

Researchers in various fields, such as e-learning, e-commerce, and e-services, mainly study social presence. Many studies on social presence show that social presence has a significant effect on interaction, increased learning, and motivation. The social presence model has three categories: emotional expression, open communication, and group cohesion [63]. Emotional expression is shown with humor and self-disclosure. Elements that can represent this category, such as emoticons, videos, or images and open communication, a reciprocal exchange and mutual respect in an interaction. An example of this category is the chat element. Based on a questionnaire data, users need chat elements. This data further supports the problem of difficulties for e-resource users in university libraries. Users need this element to make it easier for them to get help from librarians.

Indeed, social presence is defined as a sense of belonging and acceptance within a group and creating camaraderie

among those groups. Social presence can increase education [74], participation, interaction, activity, motivation, learning, sense of presence, and the effectiveness of critical thinking [73]. Then social presence can also increase the use of e-resources in university libraries. Social presence is an important part of communication [75] [76], whether within the individual, in the community, or even in the library. Librarians demonstrate their presence in several ways: in person, over the phone, or on the internet.

Although there are limitations and obstacles in projecting social presence through technology, it can be done well if the element of social presence is raised according to the user requirement of the system. Social presence, which can encourage learning interactions in online learning environments, is considered essential for social learning. When a person perceives high social cues from others, they will gain a better perception of social presence to facilitate learning interactions in online libraries. e-Resources and distance education authorities can use social attendance theory [62] in course planning, applying the principles and creating a friendly learning environment that can increase attendance.

Some considerations obtained from users for the live chat element to improve communications with librarians are (1) proactive and interactive services. Proactive and interactive means users of e-resources that need an immediate response from the librarian to be able to help them or enable live chatting that provides the staff's name, add a selection of common questions most people ask in live chat, and can add some new ideas. This first suggestion directs the conversation and anthropomorphic (need to attribute human characteristics to a particular object). Users need a new chat. They also need Live Agent and mobile live (2) Date and time, which means that users need information about the date and time when using the collection when borrowing facilities from the library. (3) Rating or the recorded number to follow up on some issue. (4) Social Media like Telegram, Twitter, and Google Meet. (5) A unique mark appears if the message has been read (6) login notifications (7) support (8) help (9) updates according to user feedback and [77] QR code.

Another consideration about library accounts, users need (1) date due or expired dates/ renewal notification, (2) rent/ prices, (3) Search (4) Payment through a unique program. In the library or payment upon receipt of request, (5) things matter, (6) Book rental, (7) Acquisition Section, (8) Registration Section (9) Cataloging and Classification, (10) Book storage place, (11) Digital book (12) and library community.

For link elements, users need (1) a professional blog, (2) Most Read, (3) Social communication, (4) A hyperlink points to a whole document or a specific element within a document, (5) HTML with hyperlinks, (6) archive links. Several specialized bodies produce specific software to design unique systems for automatic programming in the field of education so that it is easier for school and college teachers to prepare and present different lessons to their students. These lessons include training, introducing new material, conducting a test, or simulating a specific reality or other existing activities in the classroom. This facilitates and helps the user and spreads to all students through the university library.

For Accessibility, users may add some suggestions. They are (1) sound navigation, (2) Voice over text/ Voice reading, (3) Virtual voice assistance as guidance for e-resources/ Voice search, (4) Fonts type, (5) Color background writing and paper frames as well as numbering, (6) Service Request, (7) assign a supervisor, (8) Navigation Move, (9) A specialized librarian to register users of services available to people with disabilities, (10) sick cart. According to the World Health Organization (WHO), disability has three dimensions: Impairment in a person's body structure or function or mental functioning; examples of impairments include loss of a limb, loss of vision, or memory loss. Thirdly is the limitation of activity [78], such as difficulty seeing, hearing, walking, or problem-solving.

According to social presence theory, information sharing will only be limited if the quality of communication is high. Social presence theory states that creating a cognitive, social presence is relatively challenging because it requires a longer time and more frequent and intensive social interactions. For example, students like to go to the library to study together but also need social activities such as hanging out or shopping. In addition, an effective social presence can only partially be formed, as some students hide from online lessons by not turning on, facing their cameras, or even being present in live sessions. The research in [49] states that some students prefer to watch only recorded lessons.

Social presence is defined as the experience of meeting other people in a medium and interacting with others. Social presence plays a vital role in an online service environment, where there is no face-to-face interaction between the user and the librarian. Previous studies have used social presence theory to explain the social perspective of social commerce. Social presence describes the ability of communication media to convey social signals, such as socially rich messages, virtual agents [51] [79], human-like interfaces, 3D displays [80] [81], and telepresence [48]. Suppose the theory of social presence is applied in the library system. In that case, it will be able to engage library users with the library system or e-resources.

Social presence through interaction between users in e-resources refers to the ability of websites to convey a sense of sociability and human warmth [82] [83]. Web pages containing rich social messages can express a sense of personal presence. The availability of reviews and recommendation features on e-resources pages also increases presence through user interaction.

In an online environment, interacting with photos or videos can create a sense of warmth and human friendliness. Visual presence, such as photos or videos, is essential in attendance through interaction between users and librarians because these elements can describe real people in an online environment. Visual design factors such as images, colors, and graphics can significantly influence people's trust in the online environment. Kracher et al. (2003) also stated that photos could build trust between users and librarians. These visual elements [80], such as images and colors, are essential to the social presence.

VI. Conclusions

Users need help accessing the e-resources system interface in university libraries. These difficulties trigger users' negative emotions and result in the low usage of e-resources in university libraries which causes a decline in university performance. This study contributes to the point of view of increasing the use of e-resources in university libraries by finding elements that can increase positive emotions in users so that users enjoy using e-resources in libraries which will improve the quality of students and lecturers as well as university education and performance. The new elements for the e-resources interface are live chat with voice element, comment, rating and tool. Library account with personalized welcome, preference language, links for reference managers, and social media, and accessibility such as readable help font, color, and font size.

A. Limitation

The limitation of this study is that convenience sampling is used in this study's data collection to facilitate research. More comprehensive data collection techniques can be used in future studies to get more detailed data.

B. Future Work

For future research, the research method needs to be strengthened by interviews with the users to get their views. Secondly, user experience studies will be carried out using the library's e-resources system. Third, user modelling will be carried out to obtain data on an actual user's needs.

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