Copyright © 2025 by Cherkas Global University



Published in the USA International Journal of Media and Information Literacy Issued since 2016. E-ISSN: 2500-106X 2025. 10(1): 47-55

DOI: 10.13187/ijmil.2025.1.47 https://ijmil.cherkasgu.press



Information Literacy in the Context of Electronic Learning in India: a Phenomenographic Study

Abiola John Olarinde a,*, Miguel Angel Marzal Garcio-Quismondo a

^a Carlos III University of Madrid Getafe, Spain

Abstract

This study explores the concept of information literacy within e-learning environments through a phenomenographic lens, aiming to understand how LIS professionals and educators' experience and use information effectively in virtual learning contexts either as a learner or an instructor. The method seeks to uncover the different ways IL practitioners perceive and approach information literacy tasks in online settings. Data were collected through semi-structured interviews for 12 LIS professionals – PhD students of LIS, LIS faculty, senior and junior librarians of higher institutions in India who have had electronic learning experience. The resulting analysis of outcome space identifies six dimensions of variation and seven categories in Table 3 with foci of intersection. The evolving relationship of the categories was also revealed in a basic target diagram with critical thinking skills as the nucleus. These categories show diverse understanding of IL practitioners in terms of skills and other requirements of IL in the context of VLE such as critical thinking, computer technology facility, independent learning, ethical use, IL instruction, learning outcome and expert's opinions. The findings highlight the complexity of information literacy in e-learning environments and emphasize the importance of designing instructional practices and resources that address these diverse experiences.

Keywords: information literacy (IL), electronic learning environment, phenomenography, LIS professionals, categories, India.

1. Introduction

An informed society requires its citizens to be information literate as "The key characteristic of the postindustrial 21st century is that it is information abundant and intensive. Information literacy is thus required because of the ongoing proliferation of information resources and the variable methods of access". There is a significant connection between information literacy and online learning. Electronic learning, also known as e-learning, is the use of electronic technology to facilitate learning and teaching. In the context of higher education, the use of digital technology forms an integral part of the contemporary student experience (Al Abdullatif, Gameil, 2020, Selwyn, 2014). On the other hand, information literacy is the capacity to locate, assess, and use information effectively. Konnur and Rao (Konnur, Rao, 2010) in their study on "Information literacy abilities of Indian students as well as the contribution of electronic learning to the growth of these abilities. In a separate research, Sarode (Sarode, 2017) focused on the effects of digital technology on the information literacy abilities of library and information science workers in India.

Given the Covid 19 pandemic, the demand for e-learning environment has been excercabated. And due to the development of information and communication technologies,

^{*} Corresponding author

E-mail addresses: geniusbiola@gmail.com (A.J. Olarinde)

libraries must adapt to the needs of their users and provide IL activities also in e-environments (Nazari, Webber, 2012).

The overall aim of this research work is to investigate the LIS professional's information literacy experience within the domain electronic learning environment

2. Materials and methods

Phenomenography has been frequently utilized in the sphere of education, to examine the spectrum of intricacy of experiences of various phenomena. As a result, information literacy has frequently been perceived as a vehicle for knowledge acquisition (Bruce, 2008; Forster, 2015a). It is pertinent to know that information literacy now extends beyond acknowledging its role in education to include its use as a tool for leadership, teamwork, creativity, communication, and compassion (Forster, 2017a; Donaldson, Inskip, 2017).

Phenomenographic studies have been used as a basis of evidence-based information literacy educational interventions (Andretta, 2007). The main task of a phenomenographic study is the interpreting cases of encounters with a phenomenon.

Participants: India is currently the most populous country in the world with plausible highest number of library schools. By implication, it trains more librarians and academics in information literacy profession. However, the participant selection has been confined to information literacy professionals in Western India comprises three large states (Maharashtra, Rajasthan and Gujarat), one small state (Goa) and one small union territory (Dadra and Nagar Haveli and Daman and Diu — a group of enclaves, former Portuguese territories, within Gujarat). It is bounded by Pakistan and the Arabian Sea to its west and the gangetic plains to its east. This is the most heterogeneous of India's regions, with the states differing dramatically from one another in language, culture and levels of economic development. Maharashtra and Gujarat are among the most industrialized states of India, while Rajasthan and Goa are magnets for tourists, though for different reasons. It's important to remember that India is an incredibly diverse country with a rich tapestry of cultures, languages, and traditions.

Western India is no exception, encompassing states such as Maharashtra, Gujarat, Rajasthan, and Goa. There are some general cultural traits and practices that are commonly associated with the region and representative of the entire country. All this informed the choice of information literacy professionals from western India. Besides the "phenomenon" experience of the participants, other factors such as ease of access to states, face-to-face access to participants, language barrier were all considered when determining the region (Western) so as to ensure that all perceived barriers are mitigated. Once physical access has been granted and permission obtained (Gummesson, 2000), whilst occasionally it may be possible to collect data from the total population, for example, an organization's employees; for most research projects this will be impossible.

Data Collection and Analysis: Interview questions were subjected to revision by experts to make them more concrete with the aim of focusing the participants' towards the phenomena under investigation. In a phenomenographic interview, the questions are semi-structured, i.e. they are open-ended to provide the respondents the flexibility to select the dimensions or features of the phenomena that they want to elaborate on. Additionally, this makes room for more surprising responses, which aids the researcher in comprehending the larger picture. This method permits the asking of follow-up questions or reformulated inquiries because it is assumed that the researcher cannot tell how the question was received until the respondent provides an answer.

A number of follow up questions will be employed to encourage participants to elaborate on or clarify the responses they had provided. The interviewer will also be cautious while asking follow-up questions careful to avoid leading the practitioners' responses. The following details of the interview will be included: the length of interviews; format: Audio recordings and paper (verbatim transcripts).

Conclusively, phenomenography focuses on collective perspectives and difference in how a phenomenon is experienced, even when data may be obtained at the individual level. In this sense, the first step towards creating a communal knowledge of the various ways in which specific phenomena may be perceived is the collection of data at the individual level. Open-ended interview questions are specifically crafted to guide the interviewee toward the topic of interest.

Interview: Semi-structured interviews were used for data collection and this is the most common technique utilized in phenomenographic research (Limberg, 2000). Yates et al. (Yates et al., 2012) asserts that "Interview questions are designed in such a way so as to reveal different

aspects of the particular phenomenon of interest. The questions posed are typically open-ended and divergent in nature in order to allow participants to describe their own experience of the phenomenon under investigation".

Interviewee	Recording Length (minutes)	Transcript (pages)
1 – University Librarian	23:39	8
2 – University Librarian	11:23	4
3 – University Librarian	16:35	5
(online)		
4 – LIS Faculty member	27:38	7
5 – LIS Faculty member	22:11	7
6 – LIS PhD Candidate	14:09	6
7 – LIS PhD Candidate	14:39	6
8 – Assistant Librarian	17:29	4
9 – Assistant Librarian	08:37	4
10 – Assistant Librarian	12:29	3
11 – Assistant Librarian	09:34	3
12 – Assistant Librarian	11:44	4

Table 1. Phenomenography Interview Details

Over twenty-nine (29) email requests for the oral interview were sent to the LIS professionals, only fourteen (14) consented to the interview and twelve (12) eventually granted the interviews. The interviews were recorded with the consent of the interviewees and transcribed using an artificial intelligence (AI) – TurboScribe. The details of the interviews (professional status of the interviewees, recording length and number of pages of the verbatim transcripts) are as shown in the Table 1. Time New Romans theme font, 12 font size and 1.5-line spacing were applied on the verbatim transcripts in word document to arrive at the number of pages for each transcript.

3. Discussion

The data analysis of a phenomenographic study is used to understandhow the phenomenon being investigated varies in individual's experience (Bruce, 2000, Limberg, 2005). Instead of viewing the data as distinct sets by transcript, a phenomenographic analysis views all of the data as a single set. As a result, different contexts was used to interpret each transcript. This process was strictly followed in the analysis. In practice, the steps are constantly iterated, though. Using a phenomenographic approach, there is the assumption that the categories are not "discovered" within the data, but rather are created by the researcher(s) in connection to the data. For the set of data in this research, counter examples in the data are considered and talked about with colleagues to prevent the results from reiterating or presenting preconceived opinions. The analysis started with a smaller set of data — five of the transcripts by the senior librarians and LIS faculty members. In view of the complete collection of data, the similarities and differences are later reexamined. The complete transcripts are reviewed numerous times during the analysis process since every new question formulated and every new viewpoint is examined in light of the entire body of material. This implies that with every reading, the focus is on a different query or concept. The data analysis has shown seven different categories which depicted the different ways the library and information (LIS) professionals experienced information literacy in the context of virtual learning environment either as LIS postgraduate students, librarians or as faculty members in the electronic learning space.

Category 1: Information literacy in electronic learning environment requires critical thinking skills.

Category 2: Electronic learning creates the need for some computer technological facility

Category 3: Electronic learning environment helps to foster independent learning skills in the learners.

Category 4: Information literacy in the virtual learning environment poses ethical issues.

Category 5: The integration of information literacy instruction into the e-learning curriculum constitute a concern in the digital age.

Category 6: Learning outcomes is a way to evaluate electronic resources for academic purposes.

Category 7: Expert's opinion is another way to assess electronic resources for academic purposes.

The analysis of data in a phenomenographic study typically involves several stages, beginning with data collection, which often consists of in-depth interviews designed to elicit rich descriptions of participants' experiences (Grossoehme, 2014). This approach was postulated and advanced by Ference Marton and his colleagues, in an attempt to uncover the range of variation in human experience, rather than focusing on individual accounts in isolation (Orgill, 2012).

According to Sutton and Austin (Sutton, Austin, 2015), illustrative quotes play a crucial role in phenomenographic analysis by providing direct evidence of participants' perspectives and grounding the researcher's interpretations in the lived experiences of those being studied. By Linard and Watling's (Linard, Watling, 2021) principle of authenticity, researchers can select quotes that are not only representative but also seamlessly integrated into their narrative, thereby supporting their claims and illuminating participants' experiences. On the other hand is the possible misinterpretation of the participants' intended meanings when adequate context is not provided. The outcome space and categories of description are key methodological features (Raza et al., 2024).

4. Results

Descriptions of the Categories

Category 1: Information literacy in the context of virtual learning environment requires *critical thinking skills.*

Meaning: In this category, LIS professionals perceive information literacy in the virtual learning environment as such that tasks your thought process.

Focus: In this category, the main focus is on the analysis of the process.

Illustrative quotes

Interviewee 1 (p. 1)

"Okay. Now, your question is information literacy in the context of virtual learning environment. It can be described through various dimensions.First one is the critical thinking skill, which is emphasizing the ability to evaluate sources for credibility, relevance and bias, especially in an online context where misinformation can easily proliferate. The second one is the digital navigation, teaching students how to effectively use research in databases, various learning resources to find reliable information..."

Interviewee 7 (p. 2)

"First of all, in a virtual learning environment, you have to think critically. You have to think critically. So students must learn how to think critically to evaluate the information."

In this category, professionals in information literacy believe that e-learning dimension being brought into information literacy calls for a critical thinking ability on the part of the searcher. IL practitioners assert that the critical thinking skills enable learners to explore and make sense of the massive volumes of information available online; they are crucial for digital literacy. Simply being able to access information and use digital tools is insufficient in the digital age. Additionally, people must be able to assess the reliability, and applicability of the information they come across. This include asking the necessary questions: who created this content? What are their credentials? Are there biases or hidden agendas behind the information? Can the claims be verified through other reliable sources? Does it decipher facts from opinions?

Category 2: Electronic learning environment creates *the need for some computer technological facility,*

Meaning: In this category, LIS professionals see the requirement of computer hardware and software and internet access as creating a socio-economic problem.

Focus: In this category, the primary focus is on *digital divide*.

Illustrative quotes

Interviewee 7 (p. 4)

"Digital divide, this is unusual access to technology and the internet can limit opportunities for information literacy development. And then the last one, which is the fourth one, as I said, there are four challenges."

Interviewee 10 (p. 2)

"So, but it also I think it also creates some challenges like it has like people who don't have access to technology or internet or like basic needs also. So, they can't just access the information from anywhere. But I guess it makes it easier to access the study material or information they want to access."

In this category, information literacy educators identified the requirement of some form of computer technology facility as a negative effect on learners from rural communities who do not have the resources to purchase the computer device or have internet access, thereby creating a digital divide. A number of variables, including infrastructure, education, location, and income, may contribute to this gap. IL educators further stressed that digital literacy, smartphones, computers, and dependable internet access are common among individuals who are "privileged" whereas those on the other side of the divide may have trouble obtaining these resources, which restricts their capacity to fully engage in the digital world.

Category 3: Electronic learning environment helps to foster independent learning in the learners.

Meaning: In this category, LIS professionals perceive that virtual learning environment promotes self-directed learning.

Focus: In this category, the primary focus is on *life-long learning skills*.

Illustrative quotes

Interviewee 8 (p. 1)

"The impact of virtual learning environment is that the students, or whomever the person accessing the information, they have the self-directed learning, self-paced learning also is there. That whenever, sometimes self-paced learning is also there, and like discussion forums, or the virtual courses are also there, so that they can access from anywhere, like we two are here (sic)"

Interviewee 12 (p. 3)

"The impact of information literacy on the virtual learning environment. It enhances independent learning, like research skills and decision making in online education."

In this category. IL educators opine that independent learning provides a number of important advantages that can greatly improve the educational process. It gives students more authority, encourages more active participation, and develops life applicable experience that are useful in the classroom and in the workplace. Independent learning provides flexibility, self-discipline, and allows the learner to take ownership over their learning process

Category 4: Information literacy in the virtual learning environment poses ethical issues.

Meaning: In this category, LIS professionals consider the legal use of intellectual property pivotal to information literacy in the electronic learning.

Focus: In this category, the primary focus is on the *copyright laws*.

Illustrative quotes

Interviewee 1 (p. 5)

"Another is ethical issue in information use. The ease of accessing and sharing information may lead to the issue like plagiarism and copyright infringement. So the students may lack understanding of ethical practices related to information use, affecting academic integrity"

Interviewee 4 (p. 4)

"So, these issues are very much related to the information available in the virtual learning environment. So, how the users should access those information ... ethical issues are also going to be there, okay, some information are in there, in open domain... but sometimes you require filters over there, then some mechanism of checking should be there, so that the users cannot use it blatantly without any accountability."

In this category, these LIS professionals raised concerns of respect for intellectual property such as plagiarism, copyright violations and proper citation. Fair use and licensing which includes downloading or sharing or e-resources as the license allows (e.g. creative common) is another concern. In addition, academic integrity which sometime could mean the use of e-resources for unhealthy purposes (e.g. cheating), thereby breeching the academic code of conduct.

Category 5: The *integration of information literacy instruction* into the e-learning curriculum constitute a concern in information literacy in the digital age.

Meaning: In this category, LIS practitioners see the incorporation of information literacy teaching as a challenge due to lack of motivation in electronic learning curriculum.

Focus: In this category, the primary focus is on *demotivation*.

Illustrative quotes

Interviewee 1 (p. 6).

"And integration of information literacy into curricula, this is also another challenge. Many e-learning programs may not systematically integrate information literacy instruction into their curricula. And the students may not receive comprehensive training in the skills, leaving gaps in their education."

In this category, the LIS professionals identify lack of awareness of the critical life-long skill information literacy is by the students, many educators and stakeholders. Limited synergy between the librarians and faculty and of course, lack of assessment design skills as a result of the complexity in measuring IL skills.

Category 6: Learning outcome is a way to evaluate electronic resources.

Meaning: In this category, it appears to LIS practitioners perceive that the search purpose is helpful in judging the usefulness of electronic resources.

Focus: In this category, the primary focus is on the *purpose of search*.

Illustrative quotes

Interviewee 4 (p. 6)

"Secondly, the learning outcome, whatever information is available to them, so the documents or the information, how far these documents or these are actually used, first of all, or sourced, or first of all, or downloaded, or viewed, so that is, you can say the reading rate, the viewing rate, the downloading rate, okay, that you have to first of all, understand that. So, first of all, you have to find out that to understand that this information is actually required by the user, so that they are actually reading it or they are viewing it or downloading it. So, you have to see the outcome of those information that is actually perceived, or rather, you can say, means perceived mostly by the users."

In this category, LIS professionals believe that the purpose of search for information, which in the context of teaching and learning is referred to as learning outcome determines the how the e-resource will be assessed. Accessibility, pedagogical alignment, and the development of critical skills are some of the aspects of the dynamic interaction between e-resources and learning outcomes (Prasetya et al., 2020). A crucial part of e-learning strategies, e-assessment requires teachers to use a variety of assessment modalities and carefully consider their effects using student feedback (Marimuthu, Ramraj, 2019). A framework for assessing how well e-resources support student learning is provided by learning outcomes, which are statements that outline what students should know, comprehend, and be able to perform as a result of a learning experience (Phan et al., 2019).

Category 7: Expert's opinion is another way of evaluating electronic resources.

Meaning: In this category, it appears to LIS educators that professional expertise is helpful in assessing the usefulness/appropriateness of electronic resources.

Focus: In this category, the primary focus is on *academic advising*.

Illustrative quotes

Interviewee 4 (p. 7)

"Then again, also, the experts' opinions should also be gathered. For example, the educational institutions, the teachers, they should also be involved to understand how far the available information (sic), okay... experts' expertise should also be incorporated, so that the stock of knowledge available to the users will be always valid one. Then, the statistics also you have to collect, okay, statistics regarding the usage of the information."

In this category, LIS professionals perceive expert opinion as gatekeeping in nature in ensuring quality and validating the accuracy of the e-resources. They assert their specialty at some capacity as librarians to recommend the most relevant databases, journals and digital tools to students and faculty. The LIS professionals seem to see themselves as experts in information literacy. For those in the capacity of a faculty in LIS departments ensure that the electronic resources align with the learning outcomes and course objectives.

Outcome Space

The categories of description were delimited from each other and organized hierarchically through dimensions of variation that emerged from the data. Due to the structural hierarchy of inclusiveness, some conceptions can be regarded as more complete and more complex than others (Akerlind, 2005).

The approach in Table 2 is complemented by contrasting methods of data analysis, such as those proposed by Marton and Akerlind, which categorize experiences into distinct structures, allowing for a nuanced understanding of the phenomenon (Forster, 2013).





There are six dimensions of variation that emerged from the analysis of the transcripts as shown in the Table 2 and the intersections of the arrows show the foci between the dimensions of variation and categories. The respondents provided definitions through which their difference in experiences – critical thinking skill was derived. In the opinions of two respondents, they agreed that the effect of e-learning environment on information literacy can be positive and negative which is at variance with the other ten who only identified the positive impact. Only one of the respondents differs on the positive impact of information literacy in e-learning environment, which is that it promotes the ease of independent learning. While only two of them concurred on the fact that the requirement of a computer device and internet access of e-learning can cause digital divide for learners from rural communities who do not have the resources and access to these technological facilities.

In respondents' opinions on emerging issues of information literacy in the context of e-learning environment, only three of the respondents identified ethical issue; and one spoke on the integration of information literacy instruction, which is opposed to many other emerging issues commonly stated by other nine and eleven respondents respectively.

Regarding the evaluation of e-learning resources, only one respondent each identified learning outcome and experts' opinion (i.e. two respondents) contrary to the traditional CRAAP (currency, relevance, authority, accuracy and purpose) method.

Relationship between the Categories in the Electronic Learning

The shown relationship in the figure 1 depicts the evolving relatedness of the categories. At the center of information literacy in e-learning environment is the requirement of *computer technology facility*, which is the nucleus of the basic target diagram. The e-learning environment created by the computer device and internet access increases the accessibility to a plethora of information, which is being referred to information overload. As a result, the IL practitioners and educators opine that they will have to engage in *critical thinking* to filter through the gamut of

information to locate and select what meet their information need. The availability of computer technology facility and critical thinking skill promotes *independent learning*. The challenge, however, is that in the selection and use of the information needed (critical thinking), there are guiding rules called the copyright laws, which they stated are necessary to observe in order to avoid the breach of *ethical use* of the e-resource. IL practitioners and educators believe that the information has to be assessed properly in line with the *learning outcome* and ensure it meets up.



Fig. 1. Relationship between the Categories in the Electronic Learning

The IL educators asserted the need to cross-check with other *experts for their opinions*. The evolving relationship in the categories can then be used to *integrate IL instruction* in the e-learning environment.

5. Conclusion

In conclusion, this phenomenographic study has unraveled the qualitatively different ways in which LIS professionals and faculty in Western India understand and experience information literacy within the context of e-learning, showing a range of conceptions involves the relationship of the categories that identified in a basic target diagram with critical thinking skills as the nucleus. These categories show diverse understanding of IL practitioners in terms of skills and other requirements of IL in the context of VLE such as critical thinking, computer technology facility, independent learning, ethical use, IL instruction, learning outcome and expert's opinions. The resulting analysis of outcome space identifies six dimensions of variation and seven categories in Table 3 with foci of intersection. The results highlight the need for a more thorough approach to teaching information literacy that extends beyond the basic principles of information retrieval and incorporates the contextual awareness, ethical considerations, and critical thinking needed to successfully negotiate the complicated information environment of the digital age.

References

Al-Abdullatif, Gameil, 2021 – *Al-Abdullatif, A.M., Gameil, A.A.* (2021). The Effect of digital technology integration on students' academic performance through project-based learning in an e-learning environment. *International Journal of Emerging Technologies in Learning*. 16(11).

Bruce, 2006 – Bruce, C. (2006). Changing foci and expanding horizons-some reflections on directions for phenomenography and variation theory. Earli Special Ineterest Group-Phenomenography and Variation Theory: 1-19.

Eisenberg, 2008 – *Eisenberg, M.B.* (2008). Information literacy: Essential skills for the information age. *DESIDOC journal of library & information technology*. 28(2): 39-47.

Forster, 2013 – *Forster, M.* (2013). Data-analysis issues in a phenomenographic investigation of information literacy in nursing. *Nurse Researcher.* 21(2).

Forster, 2015 – *Forster, M.* (2015). Six ways of experiencing information literacy in nursing: The findings of a phenomenographic study. *Nurse education today*. 35(1): 195-200.

Head, 2013 – *Head, A.* (2013). Project information literacy: What can be learned about the information-seeking behavior of today's college students? In: *Invited Paper, Association of College and Research Librarians Conference*. Forthcoming.

Kettunen et al., 2013 – Kettunen, J., Vuorinen, R., Sampson Jr, J.P. (2013). Career practitioners' conceptions of social media in career services. British Journal of Guidance & Counselling. 41(3): 302-317.

Lingard, Watling, 2021 – *Lingard, L., Watling, C.* (2021). Effective use of quotes in qualitative research. Cham: Springer: 35-43. DOI: https://doi.org/10.1007/978-3-030-71363-8_6

Marimuthu, Ramraj, 2019 – Marimuthu, F., Ramraj, U. (2019). An authentic e-assessment task. In: Proceedings of the 2019 International Conference on E-Business and E-commerce Engineering: 41-46.

Orgill, 2012 – Orgill, M. (2012). Phenomenography. In: Seel, N.M. (ed.). *Encyclopedia of the Sciences of Learning*. Boston: Springer. https://doi.org/10.1007/978-1-4419-1428-6_271

Phan et al., 2019 – Phan, T.C., Phan, T.M., Ngo, T.T., Van Duong, N.T. (2019). A Case study in teaching: the factors determining of assessmenting the competence of technology-based. *Review of Information Engineering and Applications*. 6(2): 37-45.

Prasetya, 2020 – *Prasetya, T.A., Harjanto, C.T., Setiyawan, A.* (2020). Analysis of student satisfaction of e-learning using the end-user computing satisfaction method during the Covid-19 pandemic. *Journal of Physics*: Conference Series. IOP Publishing. 1700(1): 012012.

Raza et al., 2024 – *Raza, M.A., Qureshi, A.M., Raza, M.A.* (2024). Theoretical and methodological features of phenomenography: a comparative review. *The Critical Review of Social Sciences Studies*. 2(2): 77-95.

Statistical Year Book India, 2015 – Statistical Year Book, India (2015). Literacy Rate in India State Wise (RGI & NSSO). [Electronic resource]. URL: https://mospi.gov.in/literacy-rate-india-state-wise-rgi-nsso.

Stenfors-Hayes, 2013 – *Stenfors-Hayes, T., Hult, H., Dahlgren, M.A.* (2013). A phenomenographic approach to research in medical education. *Medical education.* 47(3): 261-270.

Sutton, Austin, 2015 – Sutton, J., Austin, Z. (2015). Qualitative research: Data collection, analysis, and management. *The Canadian journal of hospital pharmacy*. 68(3): 226.

Swargiary, 2023 – *Swargiary, K*. (2023). A Comprehensive Analysis of State-Wise Literacy Rates in India. [Electronic resource]. URL: Preprints.org

Yates et al., 2012 – *Yates, C., Partridge, H., Bruce, C.* (2012). Exploring information experiences through phenomenography. *Library and information research*. 36(112): 96-119.

Yates et al., 2012 – Yates, C., Stoodley, I., Partridge, H., Bruce, C., Cooper, H., Day, G., Edwards, S.L. (2012). Exploring health information use by older Australians within everyday life. Library Trends. 60(3): 460-478.