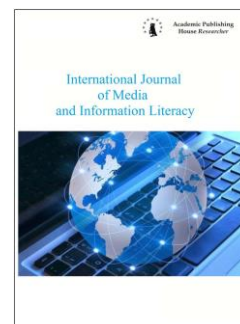


Copyright © 2021 by Academic Publishing House Researcher s.r.o.



Published in the Slovak Republic
International Journal of Media and Information Literacy
Has been issued since 2016.
E-ISSN: 2500-106X
2021, 6(1): 66-77

DOI: 10.13187/ijmil.2021.1.66
www.ejournal46.com



From Business Information Literacy to Decision-Making, Problem Solving and Innovation

Selma L. Capinzaiki Ottonicar ^{a, *}, Marta L. Pomim Valentim ^a, France Bouthillier ^b

^a Department of Information Science, Sao Paulo State University (UNESP), Brazil

^b School of Information Studies, McGill, Montreal, Canada

Abstract

In the international literature, business information literacy refers to information literacy in the business context. Most of the research in this field focuses on university libraries, thus there is a gap in the literature with respect to business information literacy in industry and competitive organizations. The purpose of this paper is to investigate the state of the art about business information literacy, and it aims to identify how researchers have studied business information literacy in businesses. The method is a systematic literature review in international scientific databases. After the analysis of the systematic literature protocol, we included 26 papers that discuss business information literacy. These papers show that business information literacy research focuses on business management libraries and related fields. This paper concludes that libraries contribute to business management curricula, and students can develop critical thinking and lifelong learning. Similarly, members of business organizations can use business information literacy to develop critical thinking for decision-making and problem-solving.

Keywords: business information literacy, information literacy, business management libraries, business people's lifelong learning, critical thinking.

1. Introduction

Information literacy helps individuals to become more critical about the information they access. This critical thinking contributes to the evaluation of data and texts, since individuals need to evaluate among others the accuracy, credibility, authority, biases and truthfulness of information sources. Information literacy and critical thinking are fundamental to many aspects of people's lives such as personal, professional and social contexts (Belluzzo, Feres, 2015; Ottonicar et al., 2016; Santos et al., 2016; Silva et al., 2016; Yafushi, 2015).

Information literacy studies reveals a connection with lifelong learning. Regardless of the context, individuals are able to learn formally and informally. Every type of learning includes people's experience that guides behaviours and knowledge construction (Azevedo et al., 2018; Keiser, 2016; Rodriguez-Fernandes, Perez Del Prado, 2018; Sachon, 2018; Santos, Nassif, 2011; Zhang et al., 2012).

Based on those ideas, this paper aims to investigate the state of the art about business information literacy, and it aims to identify how researchers have studied business information literacy in businesses. This paper demonstrates the literature gap about that topic. Therefore, this paper encourages researchers to study business information literacy as a skill to improve the decision-making processes in competitive organizations.

* Corresponding author

E-mail addresses: selma.leticia@hotmail.com, selma.leticia@unesp.br (S.L.C. Ottonicar)

The first section of the paper is the introduction, and this section introduces the topics and its relevance to business information researchers. The second section discusses a few concepts of information literacy in the context of businesses. The third section is the methodology, which is based on a systematic literature review (SLR) about business information literacy in international databases. The fourth section provides a discussion of the results of the systematic literature review. The last section summarizes the ideas of the papers and identifies the literature gaps for future research.

2. Materials and methods

The first step of the SLR was to analyze the title and keywords of papers retrieved in eight scientific databases: Scientific Electronic Library (SciELO), Web of Science (WoS), Scopus, Brazilian Information Science Database (BRAPCI), National Meeting of Information Science (ENANCIB), Library and Information Science Abstracts (LISA) and Library, Information Science & Technology Abstracts (LISTA).

We selected papers published in scientific journals or international book chapters, papers that focus on competitive organizations and papers that study information literacy for competitive intelligence and other business management courses. We did not determine the period of time during the database search because the goal was to collect as many papers as possible.

The Latin scientific databases SciELO, BRAPCI and ENANCIB did not retrieve any paper that uses 'business information literacy' in title and keywords. We used the topic 'business information literacy' between quotations in every scientific database. The BRAPCI database showed 10 (ten) papers that connect information literacy to a business context. However, the topic 'business information literacy' is not very popular in BRAPCI yet. Table 1 shows the protocol of the SLR.

Table 1. Protocol of the SLR

Items	Explanation
Purpose	Identify papers that discuss information literacy and competitive intelligence together.
Databases	Web of Science, SCOPUS, EBSCO LISTA, Proquest LISA e Proquest Central, SciELO and BRAPCI
Period of time	No period of time. We retrieved papers published in all years in order to broader the information seeking because the topic is current and innovative.
Inclusion and Exclusion criteria	Inclusion: papers in English, Portuguese and Spanish. Papers published by journals and book chapters. All years. Papers that discuss competitive organizations and businesses. Papers that discuss information literacy to business management students. Exclusion: Papers published in other languages. Documents published in conferences.
First data retrieval	Keywords and title
Keywords	Information literacy AND competitive intelligence Information literacy AND environmental scanning Information competence AND environmental scanning Information competence AND competitive intelligence Business information literacy AND competitive intelligence Business information literacy AND environmental scanning

Strategies of information retrieval	The selected papers followed the inclusion and exclusion criteria described above. First, we selected the title and keywords. After that, we read the abstract. In the end, we read the paper. We retrieved information related to Information Science and Business Management Fields.
-------------------------------------	--

We excluded the papers that were not addressing specifically business information literacy and those that were duplicates. Therefore, we retained only 26 papers from the 139 that were retrieved. The appendix A shows the included and excluded papers based on the protocol of SLR.

3. Discussion

Information literacy in the business context

Information literacy is a scientific topic that has many concepts and approaches. Some approaches consider information literacy to be the ability to construct critical knowledge (Brady, 2021; Eisenberg et al., 2006; Keiser, 2016) and to develop digital skills in schools (Humrickhouse, 2021; Ma, Qin, 2021; Rubach, Larzarides, 2021). Information literacy is also useful for health students to seek health information (Hurt, McLoughlin, 2021; Khan et al., 2020; Stokes et al., 2021). Other approaches consider that individuals develop that literacy by their experience (Bruce, 1999). Regardless of the approach, information literacy is directly related to learning in several contexts and organizations.

Individuals access information and analyze its sources such as the author's name, ideology and interpretation based on cultural values (Lloyd, Williamson, 2008). Therefore, information literacy is an ally to lifelong learning because it encourages people to learn about different topics (Leonard et al., 2019) in their personal, professional and social life (Zimmerman, 2021).

P. Zurkowsky (1974) coined the term information literacy, and at that time, he considered that literacy was a crucial element to improve organizations. After 1974, academics started to develop further research about the topic. Information literacy discusses issues related to the field of education (Alkhezzi, Hendl, 2018; Graves et al., 2021; Reyes et al., 2018) and related theories are based on theories of learning created by great thinkers such as Piaget, Ausubel, Vygotsky, among others.

Beyond the education field, information literacy relates to other fields of knowledge such as politics in the sense that literacy contributes to citizenship as well as information science (Dawson, Yang, 2021; Hsieh et al.; Markless, Streatfield, 2017; Todorova et al, 2017) and communication when individuals access information. Furthermore, information literacy is related to the use of digital and media technologies for lifelong learning (Borkert et al., 2018). Because of these multiple links with various fields, some authors have considered that literacy is an interdisciplinary topic (Leonard et al., 2019) because it connects several scientific concepts of other fields of knowledge (Thomas et al, 2020).

Information literacy also contributes to the business management field (Cullen, Noonan, 2021) because it is a fundamental factor for decision-making, innovation and problem-solving (Thompson, 2003; Yafushi, 2020). In the context of management, information literacy allows managers and professionals to access high-quality and strategic information to benefit the company (Santos et al., 2016).

Recently, some businesses have used fake news as a strategy to compete in the market. A company may share manipulated information or even false information about themselves to affect its competitors. The competitive environment of organizations requires managers who are capable of identifying fake news and analyzing information critically (Otonicar, 2020). Therefore, information literacy helps the identification of fake news (Jones-Jang, Mortensen, Liu, 2021).

If a manager makes a decision based on false information, the company may have a high risk of bankruptcy (Ferraro, Chipman, 2019). Therefore, information literacy is crucial to help managers to access truthful information on the internet, social media and information communication technology.

In addition to knowing how to deal with information sources, business people can use information literacy to develop such literacy in the context of work, especially in the transition between theoretical knowledge and practical knowledge (Lloyd, 2007; Rodriguez-Fernandes, Perez Del Prado, 2018; Sachon, 2018).

In conclusion, information literacy is useful to the corporate world and to business people who work for many organizations such as hospitals, schools, small businesses, startups and commercial associations (Ahmad et al., 2020; Khailova, 2021; Rosenberg, 2002; Yafushi, 2020).

4. Results

The international databases presented several papers about 'business information literacy' and most of the papers were published by the Journal of Business and Finance Librarianship (Taylor & Francis) which is very specific for libraries of the business field. In Scopus, we retrieved 22 (twenty-two) papers. We selected 8 (eight) papers in WoS. LISA had 78 (seventy-eight) papers and LIST had 29 (twenty-nine) papers about business information literacy. The four databases had a total of 137 (one hundred and thirty-seven) papers.

We applied the inclusion and exclusion criteria (Table 1) to select papers for the final analysis. After analyzing the title, keywords and abstract, we chose 26 (twenty-six) scientific papers (Table 2) which are part of the discussions in this section.

Table 2. Papers of the SLR 'business information literacy'

Database	Papers
Scopus LISTA	An, A., Quail, S. (2018). Building bryt. A case study in developing an online toolkit to promote business information literacy in higher education. <i>Journal of Library and Information Services in Distance Learning</i> , 12(3-4): 71-89.
LISA	Howard, H.A., Wood, N., Stonebraker, I. (2018). Mapping information literacy using the business research competencies. <i>Reference Services Review</i> . 46(4): 543-564.
LISA	Marcos-Treceño, M.J. (2018). La formación en competencias informacionales en bibliotecas universitarias españolas de economía. <i>Revista General De Información y Documentación</i> . 28(2): 321-344.
LISA	Tariq, M., Ur Rehman, S., Mahmood, K., Mustafa, G. (2018). Online information searching skills of business students. <i>Pakistan Journal of Information Management & Libraries</i> . 20: 39-59.
Scopus WoS LISTA	Tingle, N. (2018). Taking care of business (before class): Information literacy in a flipped classroom. <i>Journal of Business and Finance Librarianship</i> . 23(2): 183-198.
LISA	Freeburg, D. (2017). A knowledge lens for information literacy: Conceptual framework and case study. <i>Journal of Documentation</i> . 73(5): 974-991.
Scopus WoS LISA LISTA	Stonebraker, I., Maxwell, C., Garcia, K., Jerrit, J. (2017). Realizing critical business information literacy: Opportunities, definitions, and best practices. <i>Journal of Business and Finance Librarianship</i> . 22(2): 135-148.
Scopus LISA LISTA	Kirkwood, H., Dejoie, R. (2016). Business information literacy integration into a freshman summer bridge course for underrepresented minorities. <i>Journal of Business and Finance Librarianship</i> . 21(3-4): 198-209.
Scopus LISA LISTA	Leavitt, L. (2016). Taking the plunge! A case study in teaching a credit-bearing information literacy course to business undergraduate students. <i>Journal of Business and Finance Librarianship</i> . 21(3-4): 274-287.
Scopus LISA LISTA	Michalak, R., Rysavy, M.D.T. (2016). Information literacy in 2015: International graduate business students' perceptions of information literacy skills compared to test-assessed skills. <i>Journal of Business and Finance Librarianship</i> . 21(2): 152-174.
Scopus LISA LISTA	Mezick, E.M., Hiris, L. (2016). Using rubrics for assessing information literacy in the finance classroom: A collaboration. <i>Journal of Business and Finance Librarianship</i> . 21(2): 95-113.
LISA	Spackman, A. (2016). Client-based experiential learning and the librarian: Information literacy for the real world. <i>Journal of Business & Finance Librarianship</i> . 21(3-4): 258-273.
Scopus LISA LISTA	Stonebraker, I. (2016). Toward informed leadership: Teaching students to make better decisions using information. <i>Journal of Business and Finance Librarianship</i> . 21(3-4): 229-238.
Scopus WoS LISA	O'Neill, T.W. (2015). The business model canvas as a platform for business information literacy instruction. <i>Reference Services Review</i> . 43(3): 450-460.

LISTA	
Scopus LISTA	Stonebraker, I. (2015). Flipping the business information literacy classroom: Redesign, implementation, and assessment of a case study. <i>Journal of Business and Finance Librarianship</i> . 20(4): 283-301.
LISA	Matarazzo, J.M., Pearlstein, T. (2014). The business case for information literacy: Why training is an important information services function. <i>Online Searcher</i> . 38(5): 42-49.
LISTA	Skipton, M.D., BAIL, J. (2014). Cognitive processes and information literacy: Some initial results from a survey of business students' learning activities. <i>Journal of Business & Finance Librarianship</i> . 19(3): 181-233.
LISA LISTA	Hristova, M., Miree, C.E. (2013). Longitudinal update: Business information literacy teaching at different academic levels. <i>Journal of Information Literacy</i> . 7(2): 153-155.
LISA LISTA	Gunn, M., Miree, C.E. (2012). Business information literacy teaching at different academic levels: An exploration of skills and implications for instructional design. <i>Journal of Information Literacy</i> . 6(1): 18-34.
Scopus LISA LISTA	Campbell, D.K. (2011). Broad focus, narrow focus: A look at information literacy across a School of Business and within a capstone course. <i>Journal of Business and Finance Librarianship</i> . 16(4): 307-325.
Scopus LISA LISTA	Fiegen, A.M. (2011). Business information literacy: A synthesis for best practices. <i>Journal of Business and Finance Librarianship</i> . 16(4): 267-288.
LISA	Aharony, N. (2010). Information literacy in the professional literature: An exploratory analysis. <i>Aslib Proceedings</i> . 62(3): 261-282.
Scopus LISA LISTA	Simon, C. (2009). Graduate business students and business information literacy: A novel approach. <i>Journal of Business and Finance Librarianship</i> . 14(3): 248-267.
Scopus LISA LISTA	Wu, Y.D., Kendall, S.L. (2006). Teaching faculty's perspectives on business information literacy. <i>Reference Services Review</i> . 34(1): 86-96.
Scopus LISA LISTA	Cooney, M. (2005). Business information literacy instruction: A survey and progress report. <i>Journal of Business and Finance Librarianship</i> . 11(1): 3-25.

The librarians A. An and S. Quail ([An, Quail, 2018](#)) developed an online tool for students to develop business information literacy. The authors evaluated the curriculum of York University students (Toronto, Canada), and they did a survey to collect data. Furthermore, they conducted a focus group with the objective of identifying students' difficulties in the teaching-learning process.

Howard, Wood and Stonebraker ([Howard et al., 2018](#)) in the paper "Mapping information literacy using the business research competencies" introduce a study to map information literacy in the business management field. According to the authors, librarians are the majority of professionals who are engaged in teaching information literacy to students. Librarians are important in the process of critical thinking, because they contribute to the development of short, medium- and long-term strategies. Therefore, these strategies influence students' learning in information literacy, so they become critical thinkers and lifelong learners in the business context.

The researcher M.J. Marcos-Treceño ([Marcos-Treceño, 2018](#)) developed a study about information literacy activities in libraries focused on economics courses in Spain. The author (2018) explains that students in the field of economics have access to various contents online such as journals and newspapers, and they face some difficulties to understand some topics and concepts of the field. Therefore, the understanding of how to access, evaluate and use information is essential for them to become information literate professionals. The Spanish context is heterogeneous and marked by inequalities regarding the support of libraries for students to develop information literacy.

In "Online information searching skills of business students", M. Tariq et al. ([Tariq et al., 2018](#)) researched the level of students' learning in business courses based on online information search skills. These authors concluded that online information training helps students to know how to seek information. The results of that research were published in the *Pakistan Journal of Information Management and Libraries*.

N. Tingle ([Tingle, 2018](#)) published the paper "Taking care of business (before class): Information literacy in a flipped classroom". In this paper, the author developed a case study with business students. The research was focused on learning to seek information and to identify

potential sources of information in the management field. This author emphasizes the importance of adopting new forms of learning with a focus on the student, so that they are able to think critically about information sources.

D. Freeburg (Freeburg, 2017) wrote the paper “A knowledge lens for information literacy: Conceptual framework and case study”. The purpose of the paper was to identify the knowledge developed through data and information access. The process of learning through data and information stimulates creativity as a social process, and it enables individuals to develop skills to survive in an uncertain world.

I. Stonebraker et al. (Stonebraker, 2017) published the paper “Realizing critical business information literacy: opportunities, definitions, and best practices”. This paper focused on managers’ ethical issues. The authors explain that Critical Business Literacy (CBL) refers to the skill that involves ethics, critical management and social responsibility in organizational contexts. In addition, CBL encourages librarians and professors to think critically about social justice, so they encourage a positive and ethical behavior to students.

In the paper “Business information literacy integration into a freshman summer bridge course for underrepresented minorities,” the authors H. Kirkwood and R. Dejoie (Kirkwood, Dejoie 2016) present the result of a partnership between a professor and a librarian. Both of the professionals aimed to improve the Management course curriculum so students can develop critical thinking. As a result, students started to develop critical thinking to make decisions in order to face the organizational problems, instead of memorizing concepts.

According to L. Leavitt (Leavitt, 2016) the insertion of the business information literacy course allows students to give more value to the Michigan State University library. Leavitt (2016) shared these ideas through the paper “Taking the plunge! A case study in teaching a credit-bearing information literacy course to business undergraduate students.” This type of course requires librarians to learn about pedagogy and information literacy.

R. Michalak and M.D.T. Rysavy (Michalak, Rysavy, 2016) showed that international business students have a different perception about their information literacy skills than reality. According to these authors, there is a difference between the necessary skills to work in the international business context and the students’ perceptions about these skills. Thus, management students can improve their skills to access and use information intelligently through information literacy.

In the paper “Using rubrics for assessing information literacy in the finance classroom: A collaboration,” Mezick and Hiris (Mezick, Hiris 2016) developed a framework for working with the business information literacy of finance students. The model is flexible and can be used in all courses of the finance program. The authors put the framework into practice with students at the end of their program, as well as to students of MBA courses. The authors emphasize the importance of collaboration between professors, librarians and university staff so that students can develop their skills and succeed in the workplace.

Business information literacy is understood as the ability to achieve professional success through lifelong learning. Management students can develop and strengthen their skills through courses about information literacy. Librarians and professors must encourage students’ critical thinking through simulated business situations (Mezick, Hiris, 2016).

A. Spackman (Spackman, 2016: 260) addresses the issue of learning through experience and explains that learning through experience is the link between theoretical and practical learning. According to this author, business schools must teach students based on practical projects. In order to do so, students need to be in contact with customers. A. Spackman (Spackman, 2016) concluded these ideas in the paper “Client-based experiential learning and the librarian: Information literacy for the real world.”

In the paper “Toward informed leadership: Teaching students to make better decisions using information”, I. Stonebraker (Stonebraker, 2016) contributed to student learning about leadership and decision-making. Her research discusses the problem of information without context, because the lack of contextualization leads professionals to make mistakes in the decision-making process. The author emphasizes that information access is not enough for decision-making because professionals must also understand the organizational environment and the context of the retrieved information.

O’Neill (O’Neill, 2015) published a research with the title “The Business model canvas as a platform for business information literacy instruction”. This paper showed management students can use the Canvas model to learn about practical concepts. This model helps students to

understand the different objectives of the business information sources. In addition, this model helps students to overcome the challenges of entrepreneurship activities, since they have difficulties to put the organization planning strategies into practice.

According to I. Stonebraker (Stonebraker, 2015) information literacy refers to the ability to access and use information in the context of business and management. The author published that idea in the paper “Flipping the business information literacy classroom: Redesign, implementation, and assessment of a case study a business information literacy”. Furthermore, I. Stonebraker (Stonebraker, 2015) explains that the combination of face-to-face and online study encourages course tutors’ and students’ learning.

Matarazzo and Pearlstein (Matarazzo, Pearlstein, 2014) explain that sustainability is one of the challenges of libraries, because these organizations often suffer from cost reduction. The authors discuss the importance of business information literacy to libraries sustainability in the paper “The Business case for information literacy: Why training is an important information services function.”

Skipton and Bail (Skipton, Bail, 2014) found out that management students prefer to use online information sources rather than print, and they published this idea in “Cognitive processes and information literacy: some initial results from a survey of business students’ learning activities”. Furthermore, the authors explained that students were hesitant to ask the librarian about information sources.

As a conclusion, the authors showed that students are not developing critical thinking for problem solving (Skipton, Bail, 2014). In order to overcome these difficulties, Hristova and Miree (Hristova, Miree, 2013) explain that exposing students very early to business information literacy is essential for learning in the paper “Longitudinal update: Business information literacy teaching at different academic levels”.

Gunn and Miree (Gunn, Miree, 2012) compared students’ information literacy in the first and last years of the undergraduate course in management through an online tutorial. They published the results in the paper “Business information literacy teaching at different academic levels: An exploration of skills and implications for instructional design”. The authors mentioned that there is no difference between first-year and final-year students’ business information literacy.

In “Broad focus, narrow focus: A look at information literacy across a School of Business and within a capstone course”, D.K. Campbell (Campbell, 2011) conducted a market research at Rider University (New Jersey, United States). The author explains that the future projects of the university will involve librarians and professors who are specialists in the business field.

A.M. Fiegen (Fiegen, 2011) analyzed papers published by librarians about the practices of business information literacy in the paper Business information literacy: a synthesis for best practices. The author concluded that most studies implement business information literacy through a partnership between the university and different professionals working at the university.

N. Aharony (Aharony, 2010) identified that information literacy is a theme that is connected to the context. In the paper “Information literacy in the professional literature: an exploratory analysis”, the author emphasizes that there is a tendency to develop research about information literacy in the medical context. N. Aharony (Aharony, 2010) showed that information literacy cannot be limited only to the context of libraries.

According to C. Simon (Simon, 2009), the current literature of business information literacy highlights the importance of partnership between librarians and other professionals in business courses. Students need to develop business information literacy to become leaders capable of managing different types of organizations. At that time, C. Simon (Simon, 2009) explained that there was not a lot of research about business information literacy to improve graduate students’ learning.

Wu and Kendall (Wu, Kendall, 2006) show the importance of establishing a partnership between librarians, professors and university professionals to implement business information literacy in Management and Business courses. Teachers expect students to know how to search reliable information sources to develop the course projects. Professional need to teach the criteria to identify quality information sources, especially online.

In the paper “Business information literacy instruction: A survey and progress report”, M. Cooney (Cooney, 2005) researched an association of librarians. The results demonstrated that business information literacy is a growing topic of courses in business management. Due to the complex and competitive nature of organizations, students need to be information literate.

5. Conclusion

The systematic literature review showed that university and college libraries have developed actions to disseminate the importance of business information literacy to the management field. Students who participate in these initiatives become professionals capable of making effective decisions. Therefore, libraries are organizations that impact businesses and they are strong allies for the innovation process.

The authors of the SLR papers agreed that the partnership between libraries, schools and universities helps to teach students how to become critical thinkers and lifelong learners. This partnership also helps to demonstrate the importance of business information literacy to decision-making, problem-solving and innovation (Cooney, 2005; Wu, Kendall, 2005; Simon, 2009; Fiegen, 2011). Furthermore, we suggest libraries should develop partnerships with business companies, manufacturing organizations and startup accelerators. The libraries can offer training to professionals to improve their information access and evaluation in the workplace. As I. Stonebraker (Stonebraker, 2016) explains, there is no point of knowing how to access information without understanding the context.

There is a gap in the literature about business information literacy in business, manufacturing companies and startups. The majority of research focuses on students' business information literacy at university. Therefore, the relationships between companies, libraries and universities should enhance practical learning. Business information literacy helps students to be prepared to deal with economic instability. Furthermore, literacy encourages business people's learning through the access of trustworthy information sources. Business information literacy allows students and professionals to construct lifelong learning in a critical and ethical way to become leaders who can overcome information challenges.

References

- Aharony, 2010 – Aharony, N. (2010). Information literacy in the professional literature: An exploratory analysis. *Aslib Proceedings*. 62(3): 261-282.
- Ahmad et al., 2020 – Ahmad, F., Widén, G., Huvila, I. (2020). The impact of workplace information literacy on organizational innovation: An empirical study. *International Journal of Information Management*. 51.
- Alkhezzi, Hendal, 2018 – Alkhezzi, F., Hendal, B. (2018). Information literacy among graduate students in Kuwait University's College of Education. *Education for Information*. 33(4): 231-246. DOI: 10.3233/EFI-170141
- An, Quail, 2018 – An, A., Quail, S. (2018). Building BRYT: A case study in developing an online toolkit to promote business information literacy in higher education. *Journal of Library and Information Services in Distance Learning*. 12(3-4): 71-89.
- Azevedo et al., 2018 – Azevedo, A.W., Araújo, W.J., Duarte, E.N. (2018). Prospecção de cenários para competências em informação como instrumento de inteligência competitiva. *InCID: Revista de Ciência da Informação e Documentação*. 8(2): 42-68. DOI: 10.11606/issn.2178-2075.v8i2p42-68
- Belluzzo, Feres, 2015 – Belluzzo, R.C.B., Feres, G.G. (2015). Competência em informação, redes de conhecimento e as metas educativas para 2021: reflexões e inter-relações. In: Belluzzo, R.C.B., Feres, G.G., Valentim, M.L.P. (Orgs.). *Redes de conhecimento e competência em informação: interfaces da gestão, mediação e uso da informação/organização*. Interciência: 1-35.
- Borkert et al., 2018 – Borkert, M., Fisher, K.E., Yafi, E. (2018). The Best, the Worst, and the Hardest to Find: How People, Mobiles, and Social Media Connect Migrants In(to) Europe. *Social Media and Society*. 4(1). DOI: 10.1177/2056305118764428
- Brady, 2021 – Brady, F. (2021). Training peer teachers to teach first year graduate level information literacy sessions. *Journal of Academic Librarianship*. 47(2). DOI: 10.1016/j.acalib.2020.102308
- Bruce, 1999 – Bruce, C.S. (1999). Workplace experiences of Information literacy. *International Journal of Information Management*. 19: 33-47.
- Campbell, 2011 – Campbell, D.K. (2011). Broad focus, narrow focus: A look at information literacy across a school of business and within a capstone course. *Journal of Business and Finance Librarianship*. 4(16): 307-325.
- Cooney, 2005 – Cooney, M. (2005). Business information literacy instruction: A survey and progress report. *Journal of Business and Finance Librarianship*. 11(1): 3-25.

- Cullen, Noonan, 2021 – Cullen, A., Noonan, P.S. (2021). Who owns and cares about the data? A method for identifying and gathering information for business research investigations. *Business Information Review*. 38(1): 21-27. DOI: 10.1177/0266382120984725
- Eisenberg et al., 2004 – Eisenberg, M.B., Lowe, C.A., Siptzer, K.L. (2004). Information literacy: Essential skills for the information age. 2.ed. Westport, Libraries Unlimited.
- Ferraro, Chipman, 2019 – Ferraro, M.F., Chipman, J. (2019). Fake news threatens our businesses, not just our politics: How trolls and profiteers use disinformation to affect the market. *The Washington Post*. [Electronic resource]. URL: https://www.washingtonpost.com/outlook/fake-news-threatens-our-businesses-not-just-our-politics/2019/02/08/f669b62c-2b1f-11e9-984d-9b8fba003e81_story.html
- Fiegen, 2011 – Fiegen, A.M. (2011). Business information literacy: A synthesis for best practices. *Journal of Business and Finance Librarianship*. 16(4): 267-288.
- Freeburg, 2017 – Freeburg, D. (2017). A knowledge lens for information literacy: Conceptual framework and case study. *Journal of Documentation*. 73(5): 974-991.
- Graves et al., 2021 – Graves, S.J., LeMire, S., Anders, K.C. (2021). Uncovering the information literacy skills of first-generation and provisionally admitted students. *Journal of Academic Librarianship*. 47(1): 102260. DOI: 10.1016/j.acalib.2020.102260
- Gunn, Miree, 2012 – Gunn, M., Miree, C.E. (2012). Business information literacy teaching at different academic levels: An exploration of skills and implications for instructional design. *Journal of Information Literacy*. 6(1): 18-34.
- Howard et al., 2018 – Howard, H.A., Wood, N., Stonebraker, I. (2018). Mapping information literacy using the business research competencies. *Reference Services Review*. 46(4): 543-564.
- Hristova, Miree, 2013 – Hristova, M., Miree, C.E. (2013). Longitudinal update: Business information literacy teaching at different academic levels. *Journal of Information Literacy*. 7(2): 153-155.
- Hsieh et al., 2021 – Hsieh, M.L., Dawson, P.H., Yang, S.Q. (2021). The ACRL Framework successes and challenges since 2016: A survey. *Journal of Academic Librarianship*. 47(2). DOI: 10.1016/j.acalib.2020.102306
- Humrickhouse, 2021 – Humrickhouse, E. (2021). Flipped classroom pedagogy in an online learning environment: A self-regulated introduction to information literacy threshold concepts. *Journal of Academic Librarianship*. 47(2). DOI: 10.1016/j.acalib.2021.102327
- Hurt, McLoughlin, 2021 – Hurt, E., McLoughlin, A. (2021). Facilitating research amongst radiographers through information literacy workshops. *Journal of The Medical Library Association*. 109(1): 112-119. DOI: 10.5195/jmla.2021.842
- Jones-Jang et al., 2021 – Jones-Jang, S.M., Mortensen, T., Liu, J. (2021). Does media literacy help identification of fake news? Information literacy helps, but other literacies don't. *American Behavioral Scientist*. 65(2): 371-388. DOI: 10.1177/0002764219869406
- Keiser, 2016 – Keiser, B.E. (2016). How information literate are you? A self-assessment by students enrolled in a competitive intelligence elective. *Journal of Business & Finance Librarianship*. 21(3-4): 210-228. DOI: 10.1080/08963568.2016.1226613
- Khailova, 2021 – Khailova, L. (2021). Using curriculum mapping to scaffold and equitably distribute information literacy instruction for graduate professional studies programs. *The Journal of Academic Librarianship*. 47(1).
- Khan et al., 2020 – Khan, S., Asif, A., Jaffery, A.E. (2020). Language in a Time of COVID-19: literacy bias ethnic minorities face during COVID-19 from Online Information in the UK. *Journal of Racial and Ethnic Health Disparities*. DOI: 10.1007/s40615-020-00883-8
- Kirkwood, Dejoie, 2016 – Kirkwood, H., Dejoie, R. (2016). Business information literacy integration into a freshman summer bridge course for underrepresented minorities. *Journal of Business and Finance Librarianship*. 21(3-4): 198-209.
- Leavitt, 2016 – Leavitt, L. (2016). Taking the plunge! A case study in teaching a credit-bearing information literacy course to business undergraduate students. *Journal of Business and Finance Librarianship*. 21(3-4): 274-287.
- Leonard et al., 2019 – Leonard, A.E., Lansiquot, R.D. MacDonald, S.P. (2019). Information Literacy in Place-Based Interdisciplinary Teaching and Learning Interdisciplinary Perspectives on Virtual Place-Based Learning. Springer International Publishing. 53: 68.

- Lloyd, 2007 – Lloyd, A. (2007). Recasting information literacy as sociocultural practice: Implications for library and information science researchers. *Information Research*. 12(4).
- Lloyd, Williamson, 2008 – Lloyd, A., Williamson, K. (2008). Towards an understanding of information literacy in context: implications for research. *Journal of Librarianship and Information Science*. 40(1).
- Ma, Qin, 2021 – Ma, Y., Qin, X. (2021). Measurement invariance of information, communication and technology (ICT) engagement and its relationship with student academic literacy: Evidence from PISA 2018. *Studies in Educational Evaluation*. 68(100982). DOI: 10.1016/j.stueduc.2021.100982
- Marcos–Treceño, 2018 – Marcos–Treceño, M.J. (2018). La formación en competencias informacionales en bibliotecas universitarias españolas de economía. *Revista General de Información y Documentación*. 28(2): 321-344.
- Markless, Streatfield, 2017 – Markless, S., Streatfield, D. (2017). How can you tell if it's working? Recent developments in impact evaluation and their implications for information literacy practice. *Journal of Information Literacy*. 11(1): 106-119. DOI: 10.11645/11.1.2201
- Matarazzo, Pearlstein, 2014 – Matarazzo, J. M., Pearlstein, T. (2014). The business case for information literacy: Why training is an important information services function. *Online Searcher*. 38(5): 42-49.
- Mezick, Hiris, 2016 – Mezick, E.M., Hiris, L. (2016). Using rubrics for assessing information literacy in the finance classroom: A collaboration. *Journal of Business and Finance Librarianship*. 21(2): 95-113.
- Michalak, Rysavy, 2016 – Michalak, R., Rysavy, M.D.T. (2016). Information literacy in 2015: International graduate business students' perceptions of information literacy skills compared to test-assessed skills. *Journal of Business and Finance Librarianship*. 21(2): 152-174.
- O'Neil, 2015 – O'Neill, T.W. (2015). The business model canvas as a platform for business information literacy instruction. *Reference Services Review*. 43(3): 450-460.
- Otonicar et al., 2018 – Otonicar, S.L.C., Valentim, M.L.P., Mosconi, E. (2018). Competitive Intelligence and Information Literacy in the context of Industry 4.0. *Journal of Intelligence Studies in Business (JISB)*. 8(3): 55-65.
- Otonicar, 2020 – Otonicar, S.L.C. (2020). Competitive intelligence and information literacy in the context of startups industry 4.0: interdisciplinary possibilities for Business Management and Information Science. Thesis Report (Ph.D.). Graduate Program in Information Science, Faculty of Philosophy and Sciences, Sao Paulo State University (Unesp), Marilia, Brazil.
- Reyes et al., 2018 – Reyes, B.M., Hicks, A., Maxson, B.K. (2018). Information literacy practices of Spanish-speaking graduate students at the University of Kansas. *Portal*. 18(3): 595-615. DOI: 10.1353/pla.2018.0035
- Rodriguez-Fernandez, Perez-Del-Prado, 2018 – Rodriguez-Fernandez, M.L., Perez-Del-Prado, D. (2018). El impacto de la economía 4.0 sobre las condiciones de trabajo y empleo. Estudio de caso en dos empresas de base tecnológica. *Cuadernos de Relaciones Laborales*. 36(2): 355-372.
- Rosenberg, 2002 – Rosenberg, V. (2002). Information Literacy and Small Business. In: US National Commission on Libraries and Information Science, and the National Forum on Information Literacy, for use at the Information Literacy Meeting of Experts. Proceedings [...]. Prague, Czech Republic.
- Rubach, Lazarides, 2021 – Rubach, C., Lazarides, R. (2021). Addressing 21st-century digital skills in schools – Development and validation of an instrument to measure teachers' basic ICT competence beliefs. *Computers in Human Behavior*. 118. doi: 10.1016/j.chb.2020.106636
- Sachon, 2018 – Sachon, M. (2018). Cuando personas y máquinas trabajan juntos: Los pilares de la industria 4.0. *Revista de Negócios*. 2: 46-53.
- Santos et al., 2016 – Santos, V.C.B., Santos, C.A., Belluzzo, R.C.B. (2016). A competência em informação em articulação com a inteligência competitiva no apoio ao alinhamento estratégico das informações nas organizações. *Perspectivas em Gestão & Conhecimento*. 6(special n): 45-60.
- Santos, Nassif, 2011 – Santos, E. L.; Nassif, M. E. (2011). Os profissionais de inteligência competitiva no Brasil: habilidades, competências e demandas do mercado. *Prisma.com*. 15.
- Silva et al., 2016 – Silva, E., Bassetto, C.L., Otonicar, S.L.C., Yafushi, C.A.P. (2016). O processo de inteligência competitiva e sua relação com indicadores de inovação e competência em informação. *Perspectivas em Gestão & Conhecimento*. 6(1): 240-252.

- [Simon, 2009](#) – *Simon, C.* (2009). Graduate business students and business information literacy: A novel approach. *Journal of Business and Finance Librarianship*. 14(3): 248-267.
- Simon, C.* (2009). Graduate business students and business information literacy: A novel approach. *Journal of Business and Finance Librarianship*. 14(3): 248-267.
- [Skipton, Bail, 2014](#) – *Skipton, M.D., Bail, J.* (2014). Cognitive processes and information literacy: Some initial results from a survey of business students' learning activities. *Journal of Business & Finance Librarianship*. 19(3): 181-233.
- [Spackman, 2016](#) – *Spackman, A.* (2016). Client-based experiential learning and the librarian: Information literacy for the real world. *Journal of Business & Finance Librarianship*. 21(3-4): 258-273.
- [Stokes et al., 2021](#) – *Stokes, P., Priharjo, R. Urquhart, C.* (2021). Validation of information-seeking behaviour of nursing students confirms most profiles but also indicates desirable changes for information literacy support. *Journal of Documentation*. DOI: 10.1108/JD-09-2020-0158.
- [Stonebraker et al, 2017](#) – *Stonebraker, I., Maxwell, C., Garcia, K., Jerrit, J.* (2017). Realizing critical business information literacy: Opportunities, definitions, and best practices. *Journal of Business and Finance Librarianship*. 22(2): 135-148.
- [Stonebraker, 2015](#) – *Stonebraker, I.* (2015). Flipping the business information literacy classroom: Redesign, implementation, and assessment of a case study. *Journal of Business and Finance Librarianship*. 20(4): 283-301.
- [Stonebraker, 2016](#) – *Stonebraker, I.* (2016). Toward informed leadership: Teaching students to make better decisions using information. *Journal of Business and Finance Librarianship*. 21(3-4): 229-238.
- [Tariq et al., 2018](#) – *Tariq, M., Ur Rehman, S., Mahmood, K., Mustafa, G.* (2018). Online information searching skills of business students. *Pakistan Journal of Information Management & Libraries*. 20: 39-59.
- [Thomas et al., 2020](#) – *Thomas, N.P., Crow, S.R., Henning, J.A. Donham, J.* (2020). Information Literacy & Information Skills Instructions: new directions for school libraries. ABC-CLIO: California, 2020.
- [Thomson, 2003](#) – *Thomson, S.* (2003). Information literacy meeting of experts: conference report. 99t70.
- [Tingle, 2018](#) – *Tingle, N.* (2018). Taking care of business (before class): Information literacy in a flipped classroom. *Journal of Business and Finance Librarianship*. 23(2): 183-198.
- [Todorova et al, 2017](#) – *Todorova, T.Y., Kurbanoglu, S., Boustany, J., Dogan, G., Saunders, L., Horvat, A., Terra, A.L., Landøy, A., Repanovici, A., Morrison, C., Vanderkast, E.J.S., Secker, J., Rudzioniene, J., Kortelainen, T., Koltay, T.* (2017). Information professionals and copyright literacy: a multinational study. *Library Management*. 38(6-7): 323-344. DOI: 10.1108/LM-01-2017-0007
- [Wu, Kendall, 2006](#) – *Wu, Y.D., Kendall, S.L.* (2006). Teaching faculty's perspectives on business information literacy. *Reference Services Review*. 34(1): 86-96.
- [Yafushi, 2015](#) – *Yafushi, C.A.P.* (2015). A Competência em informação para a construção de conhecimento no processo decisório: estudo de caso na Duratex de Agudos (SP). Master's dissertation – Graduate Program in Information Science, Faculty of Philosophy and Sciences, Sao Paulo State University (Unesp), Marília, Brazil.
- [Yafushi, 2020](#) – *Yafushi, C.A.P.* (2020). A competência em informação e a agregação de valor sob a ótica do cliente: um estudo de caso em ambientes de consultoria. Thesis Report (Ph.D.) – Graduate Program in Information Science, Faculty of Philosophy and Sciences, Sao Paulo State University (Unesp), Marília, Brazil.
- [Zhang et al., 2012](#) – *Zhang, X., Majid, S., Foo, S.* (2012). Perceived environmental uncertainty, information literacy and environmental scanning: towards a refined framework. *Information Research*. 17(2): 2012.
- [Zimmerman, Ni, 2021](#) – *Zimmerman, M.S., Ni, C.* (2021). What we talk about when we talk about information literacy. *IFLA Journal*. DOI: 10.1177/0340035221989367