

THE USE OF ONLINE COLLABORATIVE WRITING TOOLS BY Ph.D. STUDENTS

Dalbert Marques Oliveira¹, Ana Lúcia Terra²

¹*Faculdade de Letras da Universidade de Coimbra, dalbertoliveira@gmail.com, ORCID iD 0000-0001-9035-3480*

²*Faculdade de Letras da Universidade de Coimbra, anatterra@fl.uc.pt, ORCID iD 0000-0003-1292-2849*

Abstract: One of the characteristics of personal knowledge management is sharing this knowledge with peers, which can also be accomplished through tools. That said, this work communicates an empirical investigation that explored the use of online collaborative writing tools (OCW), by individuals as students of two programs in the field of Information Sciences in Portugal, intending to know, the point of view about OCWs throughout this cycle of studies. These objectives were achieved through a mixed methodology, using an exploratory and research approach. As research techniques, a bibliography and a questionnaire were used. It was observed the majority use of three OCWs, considered important for the academic path. On the other hand, it seems that the aforementioned doctoral programs could contribute more actively to the use of these OCW. This work intends to inform other investigations about the students' relationship with the OCW, collaborate so that the students themselves become aware of these tools, and contribute with the educational programs to rethink the practices that support this use.

Palavras-chave: Online collaborative writing tools, Personal Knowledge Management, Ph.D. students

INTRODUCTION

This work is limited to the use of online collaborative writing tools (OCW) by individuals as students of two doctoral programs: the Doctoral Program in Information Science at the University of Coimbra (PDCI); and the Doctoral Program in Information and Communication on Digital Information Platforms (ICPD), taught jointly by the University of Porto and the University of Aveiro.

Researchers like Ngulube (2015) comment on the scarcity of empirical studies with clear methodologies related to knowledge management, which also seems to apply to personal knowledge management (PKM). On the other hand, there are still few investigations that address the use of OCW by Ph.D. students (M. M. C. Gallotti, 2017).

On the other hand, it is possible to find works that information about the use of technological tools for the PKM (Ismail & Ahmad, 2015; Liu et al., 2017; Razmerita et al., 2009) and OCW, mainly those that are part of the Google application suite, inserted in Google Drive, and Microsoft, inserted in the old Office Live, and currently in OneDrive, Office 365 and Teams, both in basic and university education (Abrams, 2016; Brescó Baiges & Verdú Surroca, 2014; Castellanos Sánchez & Martínez de la Muela, 2013; Miseviciene et al., 2011; Naik et al., 2013; Oliveira & Terra, 2021; Rienzo & Han, 2009; Srba, 2010).

In addition to the OCW from Google and Microsoft, it is possible to find works that mention other platforms and tools that allow collaborative writing online, such as Wiki (Cilliers, 2017), blogs (Garcia et al., 2019), Skype (Akbaba & Başkan, 2017), EtherPad (Olson et al., 2017), Dropbox (Hunsinger & Corley, 2012), Manuscripts.io, Overleaf and Authorea (Pepe et al., 2020). These tools are sometimes used for collaborative writing, sometimes as a complement to this writing (cf. Boellstorff et al., 2013).

In spite of the fact that several errors are found in the use of these OCW (Ahmed-Nacer et al., 2013; cf. Brescó Baiges & Verdú Surroca, 2014; cf. Oliveira & Terra, 2021; cf. Olson et al., 2017). The common

denominator found by these authors seems to be the ease of interaction between different elements of a group in sharing and editing information to achieve a common goal.

That said, the objectives of this work are to know the relationship of individuals, as students, with OCW, to know which OCWs are most popular for students, how and with which they use them, who influence them in this use, and the point of view of these students on the role of these programs in the use of OCW.

These objectives were achieved through a constructivist paradigm (Guba & Lincoln, 1994) using an exploratory and descriptive approach (Ngulube, 2015) and a mixed methodology, using research as a quantitative approach (Gil, 2008), and the exploration of literature as a qualitative approach (Lakatos & Marconi, 2007).

It was observed that the respondents mostly use three OCWs, mostly with their peers from the same institution, who suffer greater influences from the teachers and who consider the OCWs important for the academic path. Finally, they believe that the aforementioned doctoral programs could contribute more actively to the use of these OCW.

METHODOLOGY

In the literature review carried out for this work, it was possible to observe that there are studies on the use of OCW by students of different educational levels. All of these studies comment that these tools are an asset in education. In turn, the literature related to the use of OCW by students of Ph.D. programs is still scarce (cf. M. M. C. Gallotti, 2017).

On the other hand, there are several OCW available on the market, which have several resources (cf. Rienzo & Han, 2009). Furthermore, there are studies that comment on some flaws that these tools can present during use.

That said, this work aims to explore the use of OCW by individuals as students of PDCI and ICPD. Therefore, the objectives of the investigation are:

- Know which OCW's are most popular for PDCI students?
- How and with whom do these students use them?
- Who has an influence on this use?
- What is the role of institutions in using OCW?

In order to face these questions, this work starts from a constructivist paradigm (Guba & Lincoln, 1994), using a mixed methodology that uses research, as a quantitative approach, and the exploration of literature as a qualitative approach (Gil, 2008; Lakatos & Marconi, 2007). As research methods, the bibliographic was used, through a literature review (Webster & Watson, 2002), justifying the construction of a questionnaire.

The sample was obtained through contact with class representatives, through group publications of the referred programs on Facebook, through direct contact with students, and through the institutional email sent by the course coordinators to students and graduates.

RESULTS

47 responses were obtained, which corresponds to just over 14% of the investigated population. Using a 95% confidence interval, this sample has a margin of error of 13.3% (Levin, 1987). Among these 47 respondents, 39 declared they used OCW during their doctorate.

Of these 39 respondents, 92% reported using Google Drive, 61.5% Dropbox Paper and 48.7% using Microsoft tools. The choice for Google Drive seems to be related to factors such as the greater recognition of this platform, in relation to others, in relation to its connection with other tools: “[I use] Google Docs

because it integrates the reference manager Zotero”; and the practicality of use: [I use] “Google Docs and Sheets, as it is common and practical”. This preference can also be observed in the study by Gallotti (2017).

The influence to use OCW comes mostly from teachers who influenced 48.7% of respondents, followed by colleagues or researchers who influenced 38.5% of respondents. However, 33.3% of respondents stated that they had not been influenced by the use of OCW.

With regard to the collaborative use of OCW 66.7% of respondents said they used OCW with classmates/coursemates, 48.7% with colleagues/researchers from the same institution. Tied with 33.3% of respondents, there are those with colleagues/researchers from other national and international institutions.

On the other hand, when a cut is made on the role played by the doctoral program in encouraging the use of OCW, it is observed that the “mode” of these responses seems to suggest that doctoral programs play an average role in encouraging this use.

In spite of the fact that teachers were elected as the greatest influence in the use of OCW, it seems that the programs could have a more active role, as suggested by one of the respondents: “The Ph.D. programs in IC and Communication could take courses about using OCW tools, something I didn't see in my Ph.D.”.

Otherwise, the “mode” of the responses regarding the importance of using OCW for success in the Ph.D. course, seems to demonstrate that this use is considered to be very important.

In fact, the comments of some respondents show this importance. One participant commented: “I believe that tools such as OWC are important for doctoral students because they greatly assist scientific communication. These are elements that are already internalized in the doctoral research cycle”.

Finally, failures in the use of OCW were reported by 31% of respondents. Among these failures, mention was made of “data loss due to synchronization failure”; “slowness, which discouraged use”; limitations “with regard to the use of styles for paragraphs/titles and the absence of a tool to insert captions in figures (both cases it is possible to overcome the issue using third-party ad-ons)”; The loss of formatting of the document between platforms: “formatting is not always replicable for Microsoft Word, but nothing that invalidates its study”; which includes “export errors and word compatibility errors”.

These flaws are similar to those reported by users of these OCW (Jackson 203, 2019; Leme, 2016; Sarton85, 2011), by students from several countries (Oliveira & Terra, 2021), and authors like Brescó Baiges and Verdú Surroca (2014), Ahmed-Nacer et al. (2013) and Olson, et al. (2017).

CONCLUSIONS

In this investigation, it was possible to explore the importance of OCW in the Ph.D. course. It was observed that there is a set of OCWs most used by the study respondents and that on the one hand, OCWs are very useful for the Ph.D. course, but on the other hand, these programs should more actively promote this use.

Otherwise, it was possible to observe that some care is needed in the use of OCW. Synchronization failures have been identified that appear to be linked to the recording intervals of the OCW itself, which can cause conflicts when two or more people are editing the same document at the same time; formatting errors were also observed, especially when using the same document with different OCW.

That said, it is important to note that this study had a limitation, which translates into the reduced number of respondents, mainly by the ICPD, which produced a margin of error of more than about 13%, for a confidence index of 95 %. This margin of error can negatively affect the study.

It is hoped that this study can provide an insight into the use of OCW by students in the investigated doctoral programs; inform about the possibilities of these tools for sharing personal knowledge; encourage

its use by those who do not yet use OCW; and to encourage the said Doctoral Programs to approach and build explanatory courses on the use of these OCW tools.

Finally, this work did not address the different dimensions of using OCW, which includes the resources most used by these students and which of these resources can contribute to the management of personal knowledge. Future studies can address these issues.

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