Writing in doctoral programs: examining supervisors' perspectives

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Abstract In the current context of doctoral education students are required to develop a range of complex academic literacy skills to accomplish optimal performance in their academic communities of practice. This has led to increase the interest in research on doctoral writing. However, research on how supervisors contribute to doctoral writing has not been extensive. The purpose of this study is to analyze the supervisors' perspectives on doctoral writing by addressing three questions: a) What role do supervisors attribute to writing in doctoral training? b) What type of writing support do supervisors intend to provide to their students? and c) What are the relations between the role supervisors attribute to writing and the type of writing support supervisors offer to their students? Participants were 61 supervisors in the social sciences and humanities with diverse levels of expertise. Using a cross-sectional interpretative design, we collected qualitative data using an open-ended survey. Categories based on content analysis were established (Miles and Huberman 1994). The results demonstrated that supervisors attributed different roles to doctoral writing, ranging from process- to product-oriented and focusing on 1) producing appropriate academic texts, 2) generating epistemic activity, and 3) promoting communication and socialization. A significant number of supervisors did not attribute any role to writing but acknowledged writing as an important and neglected activity. Three categories of writing support were identified based on the type of activities supervisors reported and their involvement: 1) telling the students what to do, 2) reviewing and editing students' texts, and 3) collaboratively discussing students' texts. The results suggest that there are complex relations between the role that supervisors' attribute to writing and the type of writing support supervisors are able to offer. The relations appear to be mediated by supervisors' awareness and resources concerning doctoral writing.

Keywords Doctoral education · Supervision · Doctoral writing · Supervisory writing support

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Introduction

In the last two decades, there has been a constant and growing interest in research on doctoral supervision. A considerable number of studies have focused on analyzing students' perceptions of their supervisors' practices and on analyzing those issues that characterize the relationships between the supervisor and the student to identify how supervisors' approaches, styles, and activities affect doctoral students' trajectory (Barnes et al. 2012; McAlpine and Mckinnon 2013; Overall et al. 2011; Zhao et al. 2007). To a lesser extent, studies have examined supervisors' own perceptions regarding their role, beliefs and experiences (Barnes and Austin 2009; Franke and Ardvisson 2011), resulting in the development of some explanatory frameworks to better understand and interpret the rationale of supervisors' practices and roles (Lee 2008; Murphy et al. 2007).

These studies consistently highlight the complexity of supervisory activity, implying that establishing a particular type of relationship is shaped by a large and diverse range of activities. Participants have particular and not always explicit or compatible goals and expectations which, in turn, are interrelated with the varied practices and contexts in which supervisors and students participate (Halse and Malfroy 2010). Supervisors' disciplinary backgrounds as well as their own doctoral experiences, conceptions, and beliefs regarding their supervisory role have a particular influence on how this supervisory relationship develops and, therefore, on the development of students' trajectories. Additionally, research has demonstrated that in certain cases, the manner in which supervisory activities are developed may entail challenges and tensions for the supervisors themselves, particularly for novices in this role (Amundsen and McAlpine 2009). Studying how challenges and tensions arise increases understanding of the relation between supervisory activities and students' trajectories and, in particular, promotes more effective proposals focused on *learning to supervise* (Turner 2015). Writing is clearly one of the core activities in the interactions between supervisors and students because writing and publishing are critical activities for doctoral students. Students experience different tensions when writing highly specialized texts that should be aligned with genre conventions of their particular disciplinary community and contribute to the construction of academic knowledge (Bazerman 1988, 2009; Castelló et al. 2013; Gardner and Nesi 2012; Lea and Street 1998, 2006; Tusting and Barton 2016), to which must be added the requirement of publishing during the doctoral studies, which has been established by many doctoral programs in recent years (Kamler 2008; Paré 2017). In this scenario, writing becomes a site for collaboration and ongoing learning (Maher et al. 2008) and is one of the major issues for both students and supervisors (Paré 2017). In some cases, supervising writing may develop into a challenge, particularly for students and supervisors who struggle with varied meanings and emotions related to writing in research genres throughout the doctoral program (Aitchison et al. 2012; Bosanquet and Cahir 2016; Castelló et al. 2013; Cotterall 2011). Supervisors can also face difficulties when supervising writing, especially when they are newcomers to the supervisory role (Paré 2011).

Although studies have repeatedly shown that writing in the doctorate is extremely challenging for many students as well as for experienced researchers, studies focused on how supervisors help students write their theses (e.g., Aitchison et al. 2012; Bitchener et al. 2010; Lundell and Beach 2002; Paré 2011) and other complex related genres that are components of doctoral training (e.g., conferences, literature reviews, research reports, proposals, journal articles) are scarce. The meaning that supervisors attribute to the genres and writing practices across the doctoral training is an essential ingredient in the guidance of students' writing

process. To contribute to expanding our knowledge of how writing is present in the supervisory relationship, this study focuses on examining supervisors' perspectives on doctoral writing.

Supervising writing

Writing is a cognitive activity but is also social and situational and implies a highly specialized dialogical process in which students and supervisors engage throughout the doctoral journey across several genres. Moreover, learning to write across the doctorate is associated with helping students build their scholarly identities by the scientific discursive practices of disciplinary and professional communities (Aitchison et al. 2012).

Research conducted on writing has shown that offering feedback as a strategy enables doctoral students' development and learning, not only as writers but also as researchers (Castelló et al. 2013). Supervisory feedback is essential to help students become more critical regarding their texts (Kumar and Stracke 2007). The discussion of concepts and argumentation of ideas that students and supervisors hold through the texts is key for students to reflect on their own conceptual, methodological, and epistemic assumptions. Studies centered on examining the nature and characteristics of supervisory feedback have noted how some supervisory feedback practices can *enhance a community's knowledge, create a sense of identity* (Paré et al. 2011) and develop students' ability to regulate and create a feeling of agency in their writing process (Carter and Kumar 2016; Stracke and Kumar 2010; Wisker 2016).

Co-authorship practices between supervisor and student have also been revealed to be effective supports of doctoral writing that increase publication output and encourage a student's identity as a scholar (Kamler 2008). We also know that the set of strategies that supervisors use to support writing varies over time; consequently, supervisors (and their students) shape their understanding and agency over writing throughout the doctoral journey (Stillman-Webb 2016).

Supervising writing plays a significant role in promoting students' learning and researcher development (Lee and Murray 2015) by means of guiding the construction, articulation, and communication of knowledge (Paré 2011). Studies pointed out the importance of examining students' and supervisors' doctoral writing experiences (Catterall et al. 2011; Cotterall 2011) in order to enhance the development of the pedagogical practices to support writing.

Accordingly, some authors have developed pedagogical proposals for supervising writing as a component of doctoral training (Kamler and Thomson 2014) to improve learning and teach doctoral writing, which constitutes a nurturing environment in which to improve doctoral student writing. Based on existing approaches to supervision, Lee and Murray (2015) developed a model for *supervising the writing component of the doctoral curriculum* that may help supervisors adopt an approach to supervising writing that is compatible with their current supervisory practices.

Although the relevance of the studies mentioned above is undeniable, the supervisors' conceptualization of writing and the type of writing support that supervisors should offer to their students remain understudied. Research in this area could provide a broader and deeper understanding of the relations between these factors. These relations are the focus of our study, which draws on the analysis of supervisors' perspectives on doctoral writing by addressing the following questions:

a)   What role do supervisors attribute to writing in doctoral training?
b)   What type of writing support do supervisors attempt to provide to their students?
c)   What are the relations between the role supervisors attribute to writing and the type of writing support supervisors offer to their students?

Our interest here is examining doctoral writing from supervisors' experiences with doctoral students' training. Thus, our focus was not on a specific kind of genre, but on the different type of writing related to students' research (e.g., thesis, research articles or topic-based research papers). From now on, we will use the term doctoral writing to refer to the set of the related genres and practices that are characteristics of research writing (see Gardner and Nesi 2012).

Method

We applied a mixed-method design (Creswell 2014) in which the qualitative categorization of data was first developed to address the first two questions; then the qualitative results were followed by quantitative analysis to answer the third question of the study.

Participants

Participants were 61 doctoral supervisors from the social sciences and humanities (36 women and 25 men; mean age, 51), from four different disciplinary backgrounds who worked in different Spanish universities. The amount of experience ranged from one to 15 years (see Table 1).

Data collection

Data were collected by an open-ended survey to explore supervisors' perspectives concerning two issues: 1) the role of writing in doctoral students' training and 2) the type of writing support supervisors offer to their students. Participants were encouraged to write whatever they believed would provide an extensive portrait of their understanding of their roles in their doctoral students' writing. The last four questions of the survey collected background information (age, gender, discipline, and years of experience as a supervisor). Participants had 3 weeks to complete the survey, and two reminders were sent to encourage their participation. Data were collected between November and December 2014. In accordance with the ethical principles governing any research in social sciences, all of the supervisors were informed of

Table 1 Participants' characteristics

| Discipline | Years of experience | | | |
	1 to 5	6 to 10	11 to 15	16 and more
Education	11.5%	11.5%	3.3%	3.3%
Philosophy	1.6%	1.6%	3.3%	4.9%
Psychology	3.3%	6.5%	13.1%	14.8%
Sociology	9.8%	3.3%	–	8.2%

the study's aims and signed an informed consent form confirming their willingness to participate.[1]

Data analysis

Data analysis procedure followed the principles of content analysis (e.g. Miles and Huberman 1994) and included four phases. First, we read all of the information to obtain a sense of each participant's information and gain better clarity of the variation of the comments.

Second, the information was read iteratively to identify emergent parental codes regarding both explored issues: the role attributed to writing and the type of writing support offered by the supervisors. All comments that referred to how supervisors understood writing, its aims, and the role the supervisors considered writing to have in doctoral training were included under the parental code of *role*. Comments reporting the type of writing support and how the support was offered were listed under the parental code *type of writing support*. Subsequently, those codes were classified into thematic categories that were then discussed by the authors until consensus was reached.

Third, once thematic categories were established, two trained researchers independently analyzed one-third of the answers (41 of the 122 answers for both parental codes and the *role* and *type of writing support*), and their level of agreement was assessed (e.g., Krippendorff 2004; Pardo and Castelló 2016). In each category, the percentage of agreement was considered high, ranging from 89.72 to 100%. Finally, because the reliability of the system of categories was established, one of the researchers independently applied the reliability to the rest of the data.

Finally, in the fourth phase, all of the categories included in each parental code were crossed to examine interactions among them. The relations among the categories were analyzed using the Chi-square test (SPSS, v23).

Results

The role of writing in doctoral training

Three different categories were established that accounted for the variability of supervisors' comments and understanding of the *role* the participants attributed to doctoral writing. Those categories can be differentiated on the basis of what supervisors consider was the *aim, meaning*, and *focus* of this activity (see Table 2).

Doctoral writing as an instrumental activity

The first category refers to those supervisors who attributed an *instrumental* role to writing. In this case, nearly a majority of supervisors described writing as an activity primarily oriented toward *producing increasingly good and appropriate academic texts*. Thus, their interests and efforts were focused on the products of writing, the texts their students were able to produce. Supervisors' statements also referred to writing as a technical skill that may be improved by mastering its linguistic and discursive components. Participants mostly referred to general

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[1] This study was approved by the Commission on Ethics and Research (URL Ref. 2013_005).

Table 2 The role supervisors attribute to doctoral writing

	Role			
	Instrumental	Epistemic	Communicative	No clear role
Aim	Writing is intended to produce good and appropriate academic text.	Writing is intended to promote learning processes.	Writing is intended to promote research communication and socialization.	Writing is an important but neglected activity.
Meaning	Writing is shaped by linguistic and discursive skills.	Writing is an epistemic activity.	Writing is a tool to develop as a researcher.	–
Focus	Product (texts of quality).	Process to build knowledge.	Process to communicate knowledge.	–

aspects of writing such as the *appropriate use of academic language* or *thematic coherence*, although the supervisors did not specify how those aspects related to their understanding of *writing adequately*, as illustrated by these excerpts: *'[...]academic-scientific language should be used, and PhD students' texts are usually close to colloquial language when starting to write. They should practice and gradually learn how to write good texts'* (P51). *'In my opinion, it is essential to know how to write with clarity, making an adequate use of the research language in all text sections, in theoretical and contextual sections, in the method-ological part, the results, and particularly in the conclusions'* (P22).

Supervisors in this category also complained about students' lack of necessary skills and knowledge to produce *good and appropriate academic texts*. Supervisors indicated that this lack of skills leads supervisors to struggle with several difficulties to help students' writing and progress. Consequently, participants suggested the need to develop training proposals on writing skills, particularly for those students who experience problems writing at the level expected of doctoral students. The following excerpts are representative of these claims: *'[...] Unfortunately, the majority of doctoral students have serious shortcomings in writing, in the ability to express through writing. We should not have admitted them as doctoral students. But we do it. And we are wrong'* (P26). *'If the student writes well and likes writing, there aren't problems, and everything works by itself. But, if the student does not like it and does not know how to write, it is a torment. We must teach them to write'* (P57).

Some supervisors perceive writing as a general skill that once learned can be applied to different contexts and situations, even to the doctoral scenario. Participants even asserted that mastering general writing ability helps PhD students progress toward their doctorates more easily, although in those cases, their idea of research writing was simply limited to the students' ability to produce the expected academic texts without mistakes, as these excerpts illustrate: *'Students who write correctly without any orthography mistakes, they are able to carry out their research more easily. It all adds up on written texts that make evident the progress'* (P47). *'[...] If they do not know how to transmit the ideas in a concrete and comprehensive way, no matter how good the content of the thesis is, it is not effective'* (P42).

Doctoral writing as an epistemic activity

The second category included comments of those supervisors who attributed an *epistemic* role to writing. Approximately a quarter of the supervisors referred to writing as a tool intended *to*

promote learning processes, to enable knowledge construction on the research topic and to promote students' self-regulation. Thus, their comments emphasized that writing involves a complex process that must be learned and improved upon throughout the doctoral journey.

Within this category, supervisors indicated that learning how to write is crucial, is connected with knowing and managing the strategies involved in the composition process, and involves activities such as planning, drafting or reading; in these cases, the quality of students' writing products, primarily the thesis, was perceived to be strongly related to the characteristics and the complexity of the writing processes developed. Therefore, the focus was not on products, but on processes, which, in turn, require the development of writing regulation strategies. Genre knowledge and understanding are also perceived to be epistemic opportunities, as evidenced by this comment: *'I think that writing is key in students' learning and in the thesis design, since it is directly related to the processes that are required to understand the methodological aspects of the research. The fact that students understand the academic genre in which their thesis is located has important consequences in the way the students think about the product that they need to build and the process that they need to undertake to accomplish their goals. Likewise, it would be important that students learn to use both writing and reading as tools through which they can reflect on the different products of the research process'* (P3).

Furthermore, supervisors indicated a positive relation between writing practices and research development: *'Writing articulates and regulates the knowledge construction that the novice researcher undertakes. It also evidences the progress and blockages that can occur during the research process'* (P17). *'Writing has an important role in students' development as researchers and in the construction of disciplinary knowledge'* (P10).

Doctoral writing as a communicative activity

Supervisors included in this category attributed a *communicative* role to writing. Their statements described writing as an activity that seeks to promote research communication and facilitate the socialization of doctoral students within their academic contexts. As in the previous category, here the focus is on writing as *a process*; however, in this case, that process only implies adjusting linguistic and discursive mechanisms to their own disciplinary communities to communicate knowledge. This leads supervisors to consider writing as one crucial *tool* with which doctoral students may *develop as researchers*. Their comments mostly reflected that writing enables researchers to share ideas and build connections with other academics, simultaneously acknowledging that authors must take a clear stance to create feasible communication and dialogic exchanges, as shown by the following example: *'Writing allows positioning authors' ideas within the research context and sharing or discussing them with colleagues from local and international ambits'* (P35).

Additionally, supervisors emphasized that writing encourages students to make contributions to their own disciplinary fields. As the following excerpt illustrates, supervisors stressed how important it is for students to know how to communicate in their fields: *'Through writing, students can share their ideas and present how they want to contribute to their disciplines. Writing allows sharing the thoughts and reflections over the research conducted'* (P8).

Writing as an important but neglected activity

A fourth category emerged from the data that included the remaining 19.64% of participants. Their comments referred to the importance of writing in doctoral education without providing

any information regarding the role that writing plays in doctoral students' trajectory, except for noting that writing is often neglected. The following excerpt is quite representative and informative regarding the type of discourse some supervisors used when asked about the role of writing in doctoral training: *'I think that writing is important. [...] we have devoted decades training doctoral students without taking writing into account. Writing should be integrated into the doctoral programs, but this is still quite unusual'* (P30).

Characteristics of writing support offered by supervisors

The analysis of the practices and strategies that supervisors reported conducting to support their PhD students' writing also resulted in three categories that, as occurred with the role, account for the entire variability of comments related to the characteristics of writing support offered by supervisors. Those categories can be differentiated on the basis of the *type of support*, its *focus*, and the *strategies* reported by supervisors (see Table 3).

Telling what to do

The first category included one-fourth of the comments regarding the type of writing support, and that category was labeled *telling what to do*. Supervisors reported offering different types of instructions to their students regarding how the students are expected to write and what the students could or should do to write efficiently, improve their writing, and finish their texts. The majority of these instructions were restricted to guaranteeing that texts were aligned with the disciplinary conventions and scientific characteristics; thus, support was primarily focused on text characteristics, conventions, and disciplinary discursive resources intended to improve the final written product. Simultaneously, comments indicated that supervisors tended to maintain a sort of distance from their students' writing process, as shown by the following excerpt: *'At the beginning, I spend a lot of time to clearly define the problem to avoid unnecessary referrals. In some cases, I have demanded (as they can do it) that they take courses to write academic texts; some of them have sought proof-readers to complete their thesis'* (P35).

Regarding strategies, supervisors in this group emphasized offering verbal instructions and suggestions regarding how texts should be written and having their students read and emulate exemplary texts. Consequently, many supervisors reported offering writing support by providing well-written texts to their students to offer the students models of *good writing* that

Table 3 Categories of the type of writing support offered by supervisors

	Type of writing support		
	Telling what to do	Revising and editing students' texts	Discussing students' processes and products collaboratively
Focus	Products: text characteristics and conventions	Processes: revision strategies	Processes: knowledge and regulations regarding the research writing process
Strategies	Offering verbal instructions. Modeling	Offering verbal instructions. Written feedback on partial products	Developing collaborative revision Co-authorship Written feedback on partial products and on processes

students were expected to follow: *'I suggest that the students read "XXX", so that they can write as him'* (P57). *'I give them well-written theses and suggestions about how to write or to introduce tables, charts and figures'* (P61).

Revising and editing students' text

The second category refers to support focused on *revising and editing students' texts* and included comments in which supervisors reported helping their students revise their drafts or partial products and even acknowledged editing students' texts themselves. More than half of the comments regarding the type of support supervisors reported offering to their students were included in this category.

The strategies supervisors included in this category reported offering verbal instructions to their students regarding how to improve their texts; however, supervisors mostly relied on written feedback on partial products. The primary rationale for offering this type of support was that revision helps identify the weaknesses of students' writing and improve writing strategies; thus, the focus was primarily on processes and fostering revision strategies to make texts progressively better in successive versions. Nevertheless, in many cases, revisions were mostly devoted to the use of linguistic resources and wording to improve specific portions of students' texts, as this excerpt emphasizes: *'When revising the drafts, I always mark in the texts the mistakes in wording or writing; besides, I stress to the students they should care about following the citation guidelines that we are using. I write detailed reports of their progress that include aspects of content and writing'* (P5). In some cases, supervisors acknowledged introducing their own corrections (editing or wording) in their students' texts, as shown in this representative example: *'[…] Sometimes I make corrections; for instance, I correct punctuation or grammar. Sometimes I even write the sentence in the right way, or if the paragraph is not coherent, I outline it, so they can revise and correct it'* (P13). In all of those cases, strategies combine verbal instructions with oral and written feedback.

Discussing students' processes and products collaboratively

In the third category, the type of support reported by supervisors referred to *discussing students' processes and texts collaboratively*. Comments in this category appeared less frequently and reflected a type of support linked both to students' writing processes and products. In this case, the focus of supervisors' support was clearly intended to improve students' writing processes and learning. Supervisors were interested in making students aware of their own writing processes and learn to regulate those processes.

Most typical was supervisors' interest in discussing the strengths and weaknesses of students' writing. These collaborative discussions were intended to facilitate agreement regarding required changes and revisions of partial products or drafts. The focus was on improving writing processes and students' learning about their own writing. Ultimately, supervisors sought to help their students regulate the writing process.

Strategies used by supervisors were devoted to developing collaborative revision, enhancing co-authorship, and offering written feedback on partial products and processes, as shown in the following excerpts: *'[…] I need to analyse with the student the academic genre to make clear the meaning of every one of its components in the thesis as well as the relation they share. Afterwards, we will need to address writing strategies, so the student can regulate her writing by herself'* (P3). *'I intend for students not to stop writing at different points of the*

thesis, instead of leaving it as a final stage. I intend for them to think of writing as a process that needs to be improved in different moments of their progress' (P10).

As mentioned, some supervisors in this category also emphasized promoting some collaborative writing activities such as writing groups and co-authorship, in which the supervisors work with their students to help students better understand the writing process. The following statement is representative of these comments: *'First we draft tables and charts, we revise authors, ideas… in the case of articles, we write them together' (*P29). *'On the research team, we have sessions in which each participant writes a text and the rest revise it and comment on it'* (P31). In explaining these strategies, supervisors clearly demonstrated their willingness to teach writing.

The relation between the role that supervisors attribute to writing and the type of writing support they offer to their students

To establish the relation between the role that supervisors attributed to writing and the type of writing support that the supervisors reported offering to students, we superimposed the categories of these two issues (parental codes) to identify interactions (see Table 4). We observed the following primary interactions:

a) Sixteen of the 26 supervisors (61.5%) who identified writing as an *instrumental activity* supported their students' writing by *revising and editing students' texts* whereas ten (38.5%) reported offering writing support to their students by *telling* them *what to do*.

b) Conversely, we observed more diversity among the participants who considered writing to be an *epistemic activity*. Seven of the 13 supervisors (53.8%) included in this category reported supporting their students' writing by focusing *on revising and editing students' texts;* four (30.8%) reported offering writing support to their students by *discussing students' processes and products collaboratively*, and two (15.4%) reported doing so by *telling what to do*. One of the supervisors in this category extensively defined writing as a learning process but did not provide any information regarding strategies to support students' writing.

c) Four of the 6 supervisors (66.7%) who considered writing to be a *communicative activity* supported their students' writing by *revising and editing students' texts;* the remaining two (33.3%) offered support by *telling* students *what to do*.

d) Nine of the 11 supervisors (81.8%) who referred to writing as *an important but neglected activity* indicated supporting their students by *revising and editing students' texts*. Notably, one of the supervisors in this category reported *discussing the texts with the students collaboratively*, whereas another supervisor reported focusing on *telling what to do*.

The remaining five participants did not specify the strategies used to support their students' writing.

Overall, the results indicate that *revising and editing students' texts* was the dominant type of writing support reported by the supervisors whereas *discussing students' processes and products collaboratively* appeared to be less frequently utilized. The results also indicated some contradictions between supervisors' perspectives on the role of writing and the writing support the supervisors reported. For example, some supervisors attributed an *epistemic role* to writing but reported a type of writing support based on *telling what to do*. Something similar

Table 4 The relation between the role of writing and the type of writing support offered to doctoral students

		Type of writing support		
		Telling what to do	Revising and editing students' texts	Discussing students' processes and products collaboratively
Role	Instrumental	10 (38.5%) $z = 1.8$	16 (61.5%) $z = -0.4$	0 $z = -2.2$
	Epistemic	2 (15.4%) $z = -1.1$	7 (53.8%) $z = 0.9$	4 (30.8%)* $z = 3.2$
	Communicative	2 (33.3%) $z = 0.4$	4 (66.7%) $z = 0.1$	0 $z = -0.9$
	No clear role	1 (9.1%) $z = -1.5$	9 (81.8%) $z = 1.4$	1 (9.1%) $z = .0$

z: Typified residuals

*$p < .05$

occurred with supervisors who attributed a *communicative role* to writing and mentioned offering a type of support based on *telling* the students *what to do*. In both cases, although supervisors considered writing to be a *process*, the participants reported that writing support focused on products and ensuring that texts were aligned with certain disciplinary and scientific characteristics.

Results also indicated that the type of support based on *discussing students' processes and products collaboratively* was significantly more common than expected among the supervisors who attributed an epistemic role to writing and was not mentioned by supervisors who attributed an instrumental role to writing.

No significant differences were identified within socio-demographic variables (gender, discipline, and years of expertise) and the categories concerning *the role of writing* and *the type of writing support* as determined by Chi-square test.

Discussion and conclusions

In this study, we examined supervisors' attitudes toward doctoral writing as an attempt to contribute to enlarging and deepening our knowledge of how supervisors understand and address writing during doctoral training. Despite the exponential growth of research on supervision, those issues remain overlooked; therefore, we were interested not simply in describing supervisors' perspectives on writing and the type of support supervisors offered their students but also in analyzing the relations and interactions between the two issues. We believe that a better understanding of these relations is required to enhance the supervisory development and guidance of research writing, one of the most crucial competencies PhD students must develop during their doctoral training.

The results indicated that supervisors attributed three primary roles to writing during doctoral training: 1) *instrumental*, 2) *epistemic*, and 3) *communicative*. We also identified three different types of writing support that supervisors mentioned providing to their students: 1) *telling what to do*, 2) *revising and editing students' texts*, and 3) *discussing students' processes and products collaboratively*. Notably, in both cases, some supervisors were unable to explicitly clarify the role of doctoral writing or the writing support provided. Interestingly many supervisors described the writing support in terms of the strategies that they use to guide

students' thesis writing. This could be related to the fact that thesis could be considered the main written output in doctoral students' training.

Supervisors' perspectives on writing may be categorized into two groups, supervisors who were concerned about the final quality of the texts developed by the students and supervisors who were more interested in the development of students as research writers. In the first group, supervisors considered that *writing is intended to produce good and appropriate academic texts* and tended to offer a type of support based on *telling what to do* as well as on *revising and editing students' texts*. The second group, representative of understanding writing as a process-oriented activity, included the supervisors who stated that writing *aimed to promote learning processes* and *to support epistemic activity*, or *communication and socialization*. The preferred type of support offered by those supervisors was based on *discussing the text with the students collaboratively*. These results appear to indicate that product-focused writing supervisors tended to address students' writing difficulties by assuming a type of distance from students' writing processes and merely examining texts. Conversely, process-focused supervisors, particularly supervisors who attributed an *epistemic role* to writing, tended to stress that writing may be challenging; however, these supervisors assumed an active role in helping their students understand these challenges and articulate the writing process; that is, these supervisors appeared to feel a certain responsibility to teach their students how to write for the doctorate. Thus, it is reasonable to assume that the categories identified for both the *role* of writing and *type of writing support* are related to the type of supervisory style. This would be in line with previous research that also pointed out a relationship between the type of feedback provided by supervisors and supervisors' own teaching style (Kumar and Stracke 2007).

Furthermore, results regarding the type of writing support revealed that supervisory writing support generally involves only one-to-one interactions (supervisor-student) (Aitchison and Lee 2006). Only one participant mentioned encouraging the development of writing groups to support students' writing. This result implies that supervisors participating in this study clearly prioritize a dyadic supervisory relationship to support writing. The use of additional resources, which mostly indicated the use of model texts, was also frequently mentioned by supervisors, in accordance with recommendations from some recent educational proposals to improve strategies for supervising writing (Stillman-Webb 2016). Research has highlighted the significant role of supervisors as potential *teachers* of academic writing (Maher and Say 2016; Paré 2011). Thus, examining what are the different pedagogical practices supervisors put into practice to support writing (Kamler and Thomson 2014; Cotterall 2011) as well as how they understand the pedagogical component of writing—and research writing itself—may provide relevant information for institutions to evaluate supervision processes and identify the problematic situations affecting students' writing.

Surprisingly, results also indicated that in some cases, the role attributed to writing was not consistent with the writing support offered to students. This result may be related to the lack of awareness of many supervisors regarding how writing is supervised (Paré 2011). As mentioned, some participants (19.6%) had difficulty identifying the role of writing in doctoral training and confessed to not having previously reflected on that issue. Although supervisors acknowledged that writing is one of the most important activities for doctoral students, some participants experienced difficulty describing the type of writing support offered. We think these difficulties and the lack of awareness the supervisors exhibited may be related to their own writing experiences and with the type of supervisory relationships that current supervisors experienced during their doctoral journeys (Delamont et al. 1998; Lee

2008; Stephens 2014). We have not explored those issues and therefore cannot address such issues with current data; however, we believe that these questions should be addressed in future studies.

Results regarding the relation between the role of writing and the type of writing suggest that supervisors can be categorized primarily in one perspective or can combine more than one approach to supervising the different stages of writing (Lee and Murray 2015). Longitudinal studies are required to better understand how supervisors shape the writing support the supervisors offer and whether this support remains constant or varies because of different experiences that lead to developing combinations of perspectives or approaches (Stillman-Webb 2016). Moreover, further research is needed to examine how the supervisory support changes at different stages of doctoral studies (McAlpine and Mckinnon 2013). Understanding this process could also illuminate the factors involved in the shaping of the type of writing supervision that different supervisors develop.

Limitations and educational implications

We are aware that this study focuses only on supervisors' perspectives, representing only one side of the process of supervising writing. Future research should also examine students' perceptions to facilitate the similarities and differences between supervisors and students regarding how they understand and address writing throughout the doctoral journey (Catterall et al. 2011). In addition, our participants came from the social sciences; thus, the results cannot be extrapolated to other disciplinary fields because research has shown that perspectives on writing are sensitive to some contextual and cultural factors (Downs and Wardle 2007; Lea and Street 1998). Further research including supervisors from disciplines other than social sciences and humanities (Lee and Murray 2015; Tusting and Barton 2016) could provide a broader picture of the conceptualization of doctoral writing and relationship with writing support. Conversely, although the number of participants allowed us to develop a mixed-method design, further studies should utilize larger, intentional samples to create a broader portrayal of the perspectives on writing from supervisors with different backgrounds and levels of expertise.

Results from this study emphasize the importance of supervisors' being cognizant of how they understand and support writing as a component of the research training of their doctoral students. Understanding the nature of writing support may help to improve the writing practices developed by students and supervisors, addressing the relevance of providing training for supervisors of research writing and resources for those supervisors to develop strategies to support their students' writing. Supervisors' understanding of the conceptions and practices underlying their own positions on supervising writing should be the starting point of any educational or training proposal. Finally, further research on the implications of collaborative strategies such as writing groups (Aitchison and Lee 2006; Ferguson 2009; Maher et al. 2008), writing retreats (Murray and Newton 2009), and peer writing with supervisory writing support may also be valuable in providing more resources for supervising doctoral writing.

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