

E-tutoring layout in higher education: skills and efficacy perception¹.

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Abstract

The paper focuses on the topic of e-tutoring within the context of Higher Education. The research target is a framework for e-tutor role and skills in a higher education environment. The research began with a systematic review of the scientific literature with the aim of having a vision on the scientific landscape about the approach of universities to online tutoring and on the role and skills of tutors. Subsequently, to investigate more in depth, the research had a second phase with the use of a questionnaire divided into five sections, administered to two different figures of and tutors (disciplinary tutors and online tutors) of eCampus, in one of the online Italian universities. The discussion on the results investigates how important e-tutoring is for students' online learning, especially as regards the pedagogical, organization and pastoral dimensions.

Keywords: online tutoring, university, tutor, e-learning, research

1. Systematic Literary Review (SLR)

A first phase of the research has been a systematic review of the scientific literature on e-tutoring in Higher Education.

This step was fundamental since “systematic reviews aim to present a fair evaluation of a research topic by using a trustworthy, rigorous, and auditable methodology” (Kitchenham, 2004).

The advantage of an SLR is to have information on the effects of some phenomena in a wide range of empirical settings and methods, in addition to the fact that, a review of scientific literature offers an overview of the existing with respect to the subject that has been chosen to deal.

Like other objectives of this first phase of the research, we had to justify our research questions and offer a vision on what, on that topic, exists in the world of scientific literature, in order to provide our research design of a valuable and updated theoretical framework and to avoid research questions already analyzed and discussed in literature. The three phases of the systematic literature review process involved planning the SLR, conducting the review and reporting.

First, the search strings and the criteria for inclusion and exclusion of the articles were defined.

Obviously the research strings concerned the main theme of e-tutoring and the role of the e-tutor in the contexts of Higher Education: what was fundamental for us to understand was how e-tutoring was conceived in the contexts of Higher Education (McPherson, 2004) and what other researches had well defined what were the roles and tasks of the e-tutor (Triacca et al., 2018).

The search strings were designed to search for everything related to e-tutoring, Higher Education and, specifically, the role of the e-tutor.

As for the inclusion and exclusion criteria of the articles, fundamental to understand what we should give space to in the research and what we should not consider as interesting, we thought it would be useful to keep the articles:

- reviewed in a Scientific Journal, possibly with blind review;

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- published after 2000, since then year e-tutoring has been studied in depth (Salmon, 2003; Denis et al., 2004);
- with a high HI of the authors.

These criteria allowed us to select only those articles that were relevant for our research. The inclusion and exclusion criteria allowed us to select about 80 articles from the initial list of more than 400 articles found.

These articles were all uploaded to Zotero, which is a software for the management of bibliographic references and related materials that “allows one to collect, manage, store, and cite resources in a single location” (Trinoskey, 2009), read and categorized thanks to a review file that kept track of the details of each article such as, for example, authors’ names, year of publication, reference journal and keywords.

The current state-of-the-art on the research topic has been studied: we have conducted the research based on the e-tutoring subject and, in particular, the role of the e-tutor in learning processes in the Higher Education context.

The result of the literature systematic review can be summed up in three points which summarize the various research conducted:

- study personal tutoring as a support to students in difficulty during their academic course;
- study the peer tutoring practices implemented by some universities to facilitate the approach to examinations deemed particularly complex by students;
- study the practice of virtual tutoring, understood as assisted by artificial intelligence systems and used as a support tool for the students’ study process.

Also, the related research on the topic that was found in the early stages of the research concerned the role of the e-tutor in the student learning processes and in the teaching/learning practice.

This is why we considered it important to study what happens in an institution such as an online university, which is giving a lot of space to e-tutoring and the role of the tutor, both as a reference figure for students and as an expert who helps professors in the construction of courses that are published online and remain available to students.

2. The research

This contribution was initiated in the context of the eCampus University, where two different forms of tutoring are provided to accompany students (to date there are about 30,000 students enrolled on the 60 degree courses present in the training offer), called online tutors (TOL) and disciplinary tutors (TD). Currently the former are about 800 and have the task of following the entire course of study, monitoring, accompanying and supporting the student in the design of the study plan, registration for exams, interaction with teachers and with the university.

This approach is motivated by the fact that many of the students enrolled at the university already have academic qualifications gained through previous careers and, after having obtained the recognition of some credits, require personalized courses. A further motivation is the fact that both the modalities and the timing of enrollment are different compared to other Italian universities (Raviolo, 2019): in fact, students can enroll at any time of the academic year, so as to be able to start attending their degree courses. TOLs must therefore possess specific skills to manage a personalized approach to each student and collaboratively build a specific course of study suited to their needs.

There are currently about eighty TDs present at the University with the task of supporting the teacher in teaching in order to contribute to the growth of the quality of teaching; for this reason, the TD must have specific skills relating to the disciplinary area in which he provides his service (Mirzadeh et al., 2020).

Due to the particularity of this dual role (TOL and TD) and the importance accorded to it in the eCampus University, we decided to draw the framework of the research project focused on the e-tutor role and skills. The research objectives identified are the following:

- analysis of the literature regarding e-tutor models;
- detect the real practices carried out by the TOL and TD tutors, analyzing them in terms of perception of importance and competence;
- identify training needs for the design of interventions useful to enhance the skills possessed by TOLs and TDs.

Thanks to the literary review conducted consistently with the first goal expressed and which we talked about in the previous paragraph, in order to achieve research goals “2” and “3”, the research group identified in the questionnaire of De Metz and Bezuidenhout (2018), the tool that best responded to the University’s e-tutor model due to the theoretical framework underlying the development of this tool. In fact, to define the different roles that e-tutors can play in academic contexts, a three-level classification is used in the work conducted by the two researchers from the University of South Africa:

- cognitive, declining the tutoring action as a support and development of the learning process through course materials and learning objects;
- affective, indicating attention to creating a peaceful environment and communicative actions that support the student and her self-esteem;
- systemic, referring to all the administrative procedures necessary to guarantee the management and collection of information.

It is an online survey comprising quantitative and qualitative questions that investigates the e-tutor's perceptions of competence in higher education contexts. Specifically, it investigates:

- how e-tutors perceive their job roles in terms of time, importance and workload;
- what specific skills are needed to carry out their role within the university and to what extent they perceive they have such skills.

The tool is divided into five survey areas and collects data about:

- demographic information (section A);
- perception of the role performed by examining the time spent on each function and personal assessment of the importance of these functions (section B);
- dimensions of effective tutoring: 40 statements on the activities carried out by the tutor are listed (section C);
- self-assessment of skills and importance of functions in providing guidance and support to students in the academic field through 15 items (section D). The formulation of the questions asked required respondents to indicate their perceived level of importance, ranging from 1 (very important) to 5 (not at all important) for each element associated with each dimension, as well as their current level of competence, ranging from 1 (excellent) to 5 (not at all good) on a 5-point Likert scale.
- in-depth questions: three open-ended questions were included to allow for a deeper level of information sharing and analysis. Respondents were asked to discuss what factors influenced their effectiveness as an e-tutor and what were the difficulties that prevented them from being an effective e-tutor, and if they had any other comments on their e-tutoring experience (section E).

In the questionnaire the general working roles were identified by De Metz and Bezuidenhout using a combination of the classifications used by Berge (1995) and the subsequent integration offered by the work of Collins and Berge (1997), coming to identify: pedagogical, social, managerial, technician, facilitator, administrator, promoter and helper. The two researchers also decided to use the term *pastoral* in place of the terms of *promoter* or *helper* present in these classifications, to also include the dimension of accompaniment and counseling carried out by the teacher in the learning contexts.

In the Italian translation of our questionnaire, in order to avoid confusing the term *pastoral* with its widespread meaning in our socio-cultural context and pertaining to ordinary ecclesial action, we wanted to use the term "*guide*".

Final results and discussion

The data of the research conducted with the questionnaire developed by De Metz & Bezuidenhout (2018) are presented below. Trying to go beyond identifying similarities and differences between e-tutoring figures within the eCampus university (Raviolo et al., 2021), the objective of this analysis tends to respond to point 3 of our research, which is to identify training needs for the design of interventions useful to enhance the skills possessed by TOLs and TDs. We believe that this is possible by investigating at a different level of depth: starting from the idea that the functions and roles of the ToL are those shared and present in the international context, we start from the comparison of the data collected internally at the eCampus university with the data shared by the Researchers from University of South Africa (considered pioneers in the mapping of roles and tasks of e-tutors on solid theoretical and empirical constructs) with the aim of photographing these roles and improving their practices.

The questionnaire validated also in Italian (Ferrari et al., 2021) was distributed through the QuestionPro online platform to the entire group of 220 TOLs and 62 TDs operating in the eCampus University at the time. In the context of the eCampus University, the research was conducted on the group of TOLs and TDs based within the University in the calendar year 2020. The group of 220 TOLs and 62 TDs of eCampus University was reached through the QuestionPro online platform, obtaining 133 complete questionnaires from the TOL group (corresponding to 60.4% of the collective) and 42 (corresponding to 67.8%) from the relative TD group. The data were analyzed with IBM SPSS v.27. The context of the research of colleagues De Metz and Bezuidenhout is that of the University of South Africa, which is one of the telematic universities present in the South African territory. As can be seen from their study (from De Metz & Bezuidenhout, 2018), the population of e-tutors in 2018 was 215, but the study was conducted on the total of the valid questionnaires: 99; 46% of the sample.

Among the TOLs of the eCampus university, the consistent majority is female (76.7%, while only 22.3% is male) and the average age corresponds to 39 years, while among the TDs the percentage of gender female drops to 57.1% (remaining 42.9% male) and the average age is around 37 years. In the University of South Africa, male tutors (56%) are superior to female tutors (44%), data represented in figure 1. In the eCampus University almost all TOLs access the role (figure 2) with a three-year degree (67.7%) or a master's degree (23.3%), the remaining 10% of the sample also has a first or second level master's degree (respectively about 4.5% and about 2, 3%) or a PhD (2.3%). Among the TDs, the totality of the sample enters the role with at least a master's degree (38.1%) or a research doctorate (40.5%), the remainder holds a first or second level master's degree (4.7% respectively and 16.7%); in the University of South Africa, on the other hand, 52.2% have a master's degree, 22.9% a research doctorate, 17.9% a three-year degree (Baccalaureate degrees) and 7% a master's degree.

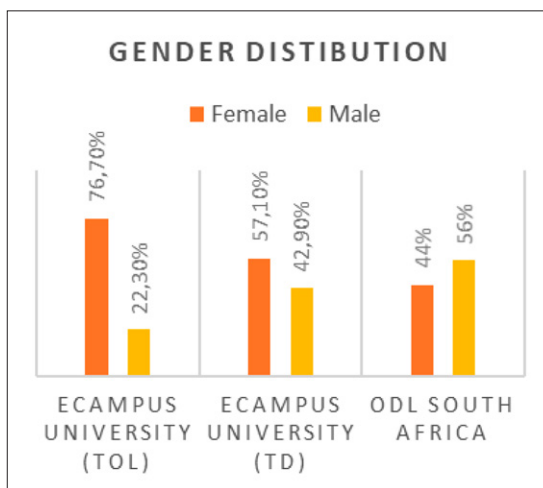


Fig. 1. Gender distribution

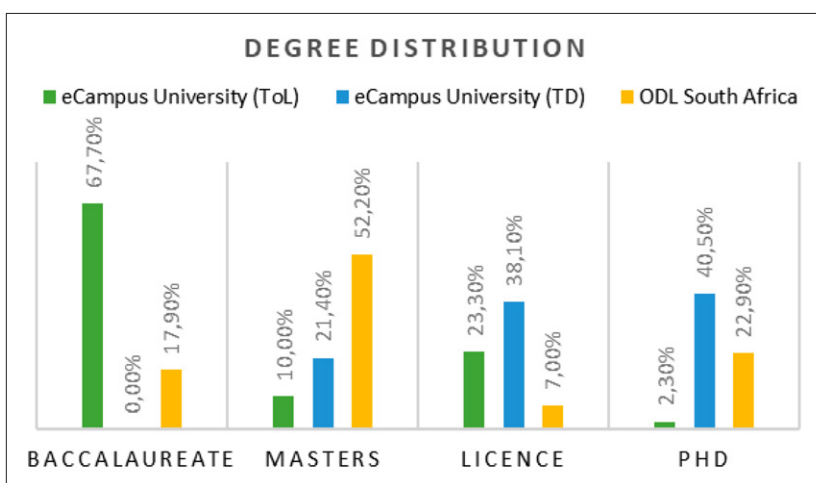


Fig. 2. Degree distribution

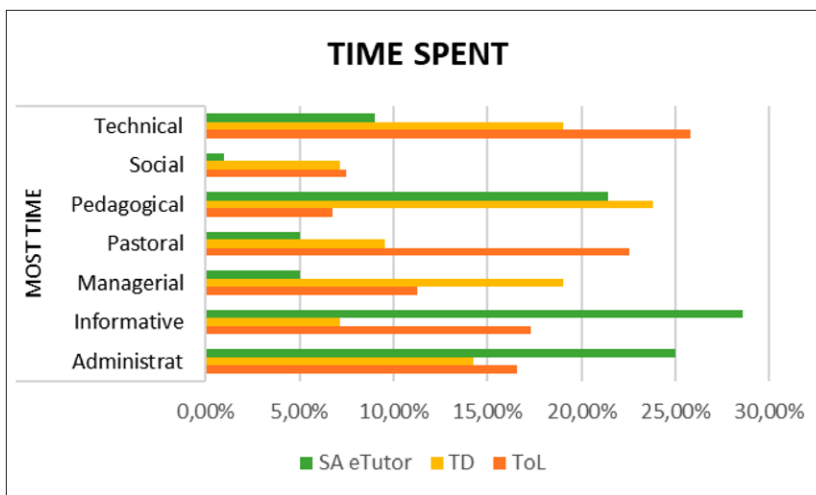


Fig. 3. e-tutors' time spent

As for the practices carried out, TOL and TD show a high degree of attachment to the role and to the university institution they represent. In response to the question “How important is e-tutor work for you”, 68% and 57.1% of the TOL and TD sample assign the maximum value of 5 (on a scale from 1 to 5) and 26, 3% of TOLs Vs 33.3% choose the value of 4, signaling good attachment to the role. 65.4% of TDs and 73.8% of TDs state that it is important to represent the University (value 5). We then proceed by investigating the data obtained regarding the evaluation that the roles of TOL and TD require in terms of time.

As shown in Figure 3, ToLs declare that they invest more time mainly in technical support and guidance activities (pastoral's role), dimensions that call for orientation within the e-learning platform on which the activities are delivered; this is followed by the information and administrative dimensions, which are key for the tutors of the University of South Africa and among the latest choices by the TDs of the eCampus university. For them, in fact, the information, pastoral and administrative roles are not among the first to require an investment in terms of time; unlike the ToLs, the pedagogical dimension requires the TDs to invest more time and which we find in third place among the choices of the tutors of University of South Africa and in the last place of the internal ToL at the eCampus university.

It is interesting to see the little time dedicated to the social function of the roles of the various e-tutor figures, a function that is one of the main success factors in online learning (McMann, 1994). In fact, this function is expressed in the creation of a friendly and comfortable social environment in which students feel that learning is possible. Furthermore, e-tutors are the first point of contact for students, especially when students encounter difficulties in their learning process (Rivoltella, 2006); result that we would have expected more from the ToL and from the tutors of the University of South Africa.

Figure 4 shows the representation of the importance attributed by the tutors to the roles covered. The analysis of the data gives us a picture that from the point of view of the value attributed to the pedagogical functions is positive, which means that the e-tutors (mostly the TDs) believe that this function is the most important, surpassed only by the information function for the e-tutors of the University of South Africa. This function is highly important for the e-tutors of University of South Africa and the authors attribute this importance to the need to inform students who enroll each year about the potential and opportunities offered by the University on the platform ("This is not surprising, as 1st year students require a lot of information to orientate themselves and become familiar with the online environment" in De Metz & Bezuidenhout, p.33).

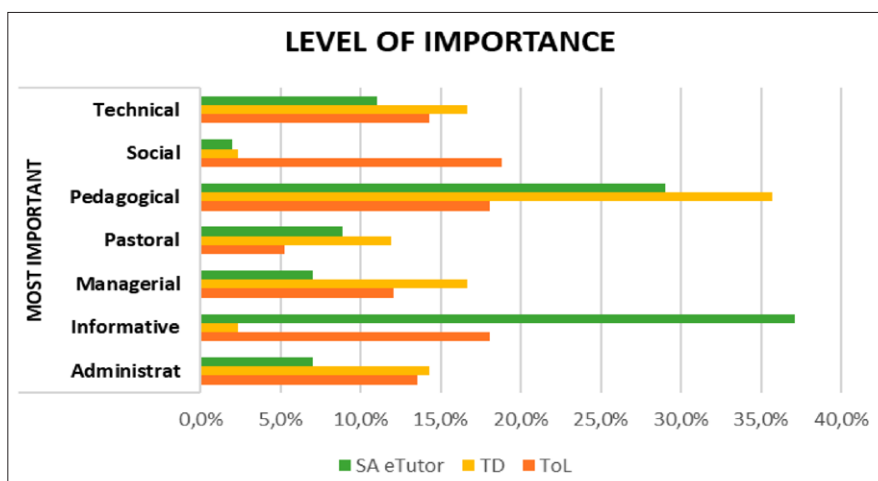


Fig. 4. Level of importance of roles attributed by the e-tutors

It is important to consider how a more in-depth analysis, distorts the results just presented (fig. 3 and fig. 4). In fact, by identifying the answers given to modalities 1 and 2 as a mirror of the roles considered most important (and modalities 6 and 7 as those considered less important, in figure 5) it is possible to observe how within our university 31.6% of TOLs believe that the technical function is the most central one, followed by the managerial one (31.6%), as shown in figure 5. In line with what was stated in the previous question relating to "time spent", the pedagogical role is the least important for TOLs (36.1%), followed by managerial (33.1%) and pastoral (33.1%) roles.

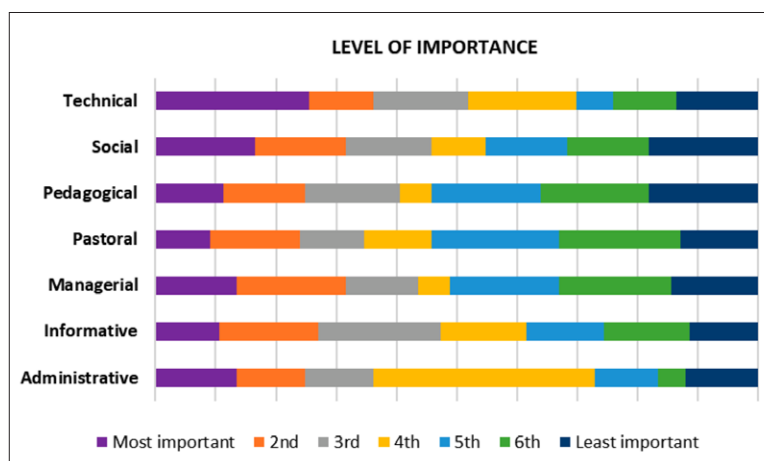


Fig. 5. TD's level of importance.

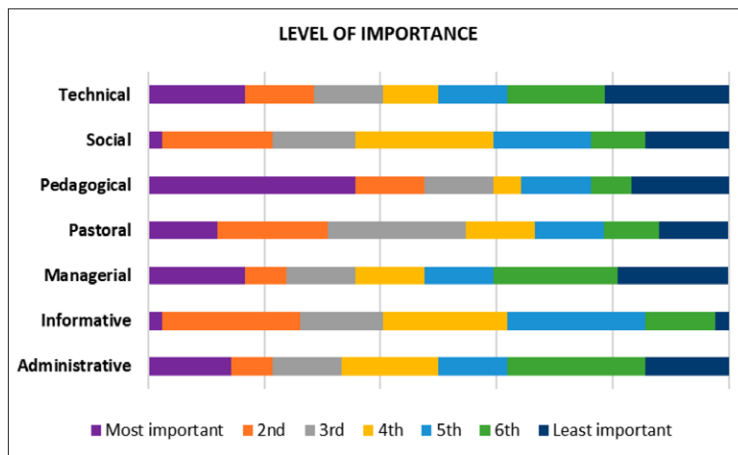


Fig. 6. ToL's level of importance.

TDs, as shown in Figure 6, declare that they consider the pedagogical (47.6%) and pastoral (30.9%) roles to be more important (modalities 1 and 2), while less important (answer modalities 6 and 7) are managerial (40.4%), administrative (38.1%) and technical (38.1%) roles, confirming the priority of the pedagogical and guiding role. In Figures 7 and 8, we represent the gap between the perceived importance within the eCampus university for ToL and TD for each function with a comparison of the skills that the e-tutors claim to have mobilized (section D of the questionnaire). In figure 8 what happens inside the University of South Africa with respect to the same dimensions. This analysis takes up the results of the importance-performance analysis by Lovelock, Patterson, and Walker (1998).



Fig. 7,8 Roles and skills perceived by e-tutors.

Analyzing Figure 7, TOLs have expressed significant discrepancies between the perceived skills and the functions actually performed (for values of $p < 0.05$). These differences relate in particular to supporting students' reflection on learning activities and outcomes (item 2), assisting learners in the development of study skills (metacognition) (item 3), making technological choices to improve learning online environment (item 4), the design of useful learning activities (item 5), the preparation of a welcoming online environment (process facilitation) (item 7), the management of communication and the creation of online communities in discussions (item 9), just-in-time identification, localization, development and production as in learning support (item 11) and, finally, the creation of new and relevant knowledge (item 15). TDs (figure 8), on the other hand, perceive themselves to be more competent than TOLs in all 15 areas, believing that their skills are spent less in the role of accompanying students (item 14, with an average difference of -0.54) and in the facilitation of content (item 1, with an average difference of -0.34).

Also, in the context of University of South Africa when the results are analyzed in more depth it is interesting to note that e-tutors experience several significant gaps between their actual skills and the roles they should fill. These gaps concern facilitating understanding with respect to the content of the teachings (point 1), supporting students' reflection on learning activities and outcomes (point 2), assisting students in the development of study skills (metacognition) (point 3), making technological choices to improve the online environment (point 4), design useful learning activities (point 5), provide a welcoming online environment (facilitate the process) (point 7), manage communication and create online communities in discussions (point 9), identification, localization, development and production just-in-time learning support (point 11), being a friend to the end, learning together with students (point 14) and creating new relevant knowledge (point 15). The number of gaps identified for the TOL of the eCampus University and the e-tutor of the University of South Africa with respect to the importance of the roles and skills perceived in the factors affecting the commitment in the pedagogical and socializing field is remarkable. Probably, the lack of interaction in presence in the face of a virtual

interaction can create a misperception in these tutoring figures of failure with respect to their efforts to support students. On the contrary, the e-tutors did not perceive a significant difference in terms of roles and competences on elements 6, 8, 10, 12 and 13 ($p \geq 0.05$), and it is in our opinion interesting to see how in the two figures of online tutors of the two universities (ToL of the eCampus University and e-tutor of the University of South Africa), overlapping values were recorded. The e-tutors therefore did not perceive significant skills gaps in terms of management, administration, ground rules and record keeping or tracking of interactions.

Within our University, the different postures of online tutors and disciplinary tutors are also highlighted by the answers given to section C of the questionnaire: on the one hand there are the online tutors who report as “I am always available when students want help” (4.76) and “I take care of the students and understand their problems” (4.44), while the TDs, linked to more disciplinary skills, reply “I have a thorough knowledge of my discipline” (4.79) and “I keep myself updated with respect to the news in my field of knowledge” (4.76). Analyzing in detail the answers given in section D of the questionnaire, it is revealed that the sample of TOL and TD believes that the university requires a greater investment of time to “provide students with advice on an individual basis” (1.56 for TOL and 1.57 for TD) and “provide timely feedback to each student” (1.62 for TOL and 1.4 for TD) consistent with the skills possessed by the two tutor figures.

Conclusion

The choice to split the e-tutor role in two organizational roles comes out indubitably from the difficulties in recruiting, organizing and managing a significant number of tutors skilled in the specific scientific topics required by every single university course. Splitting the e-tutor role the university organization can rely on a great number of basic skills developed for tutors with an initial training (the TOL) and that can easily follow students enrolled in different university courses since they do not need specific scientific skills but are mainly focused on supporting students in their learning experience on the organizational, administrative and social aspects. A tutor with a significant experience on the scientific topics (the TD), who provides a more in-depth support on pedagogical aspects of the learning experience, is few and tends to work more closely with the teaching side.

This organization works fine in terms of scalability as the number of students grows, since TOL can escalate easily while TD needs more time and training to develop adequate skills. From the pedagogic point of view, it comes out as TOLs often feel a lack of adequate pedagogic and discipline specific skills to support students. Compared to the e-tutoring skill needs of the South African study, a single e-tutor role may lead tutors to perceive as more appropriate their skill and performance. From the data on the perceived importance of the different roles (Fig. 5 and 6) it comes out that different job profiles are clearly understood by TD and a little less by TOL. The data on the time spent in every role (fig. 3) show how in practice the TOL tends to overlap even the TD role, maybe this happens because they have a stricter relationship with students that the TOL follows for the entire university course.

Comparing our research outcomes with the one of De Metz and Bezuidenhout (2018), it is clear that when the two tutoring roles (TD and TOL) are collapsed in one person the academic dimension of e-tutoring tends to prevail, while less time is devoted to the support functions for the organization and orientation of students. We must consider that the student:tutor ratio in the research mentioned is different from the one of our research; this can significantly influence the importance that tutors give to each skill area.

The present study will be completed with a further in-deep research phase based on structured interviews and focus groups, to indagate more specifically the interaction between TD and TOL in the practice and their effect on the learning experience of the students. Nevertheless, the evidence of this first research confirms how important is the e-tutoring in on-line learning, and how the skills of the tutor are relevant on three dimensions: (a) organization/management/informative; (b) pedagogical and discipline specific support; (c) social/pastoral. If the different roles are splitted, as in the presented case, it is important to provide adequate coordination and communication to avoid misconceptions and overlapping.

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