

Global South teacher educators in digital landscape: implications on professional learning

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Abstract

This article explores Pakistani and Bhutanese teacher educators' digital competences about the use of social media, digital resources and professional online communities and implications of this on professional learning. The two countries, less discussed in international educational literature, are facing a growing use of the Internet in teaching and learning. Data include a survey completed by 67 teacher educators from Pakistan and 37 teachers from Bhutan, as well as semi-structured interviews from both countries. This study provides evidence of how teachers' interaction on social networks and the use of digital resources play a central role in the introduction of innovative pedagogical practices of teacher educators, and teacher educators remain interested in knowledge sharing through social media for their professional learning.

Keywords: *teacher educators; digital competences; online communities; Pakistan; Bhutan.*

1. Introduction

Teacher educators can be considered important 'gatekeepers' who prepare and motivate a new generation of teachers (Tondeur et al, 2019), introducing teacher-students to pedagogical and technological practice and innovation. Teacher educators are considered here as a particular group of professionals with specific responsibilities, expertise and commitments in their respective educational systems (Kelchtermans, Smith & Vanderlinde, 2018). In educational literature, many researchers have focused on pre-service teachers' characteristics but less is known about teacher educators' roles, activities and competencies, especially in the so-called 'Global South'. The aim of this article is to explore the digital competences of teacher educators from two countries – Pakistan and Bhutan, only recently deeply impacted by technology in teaching and learning. In particular, we are interested in Pakistani and Bhutanese teacher educators' use of social media, digital resources and professional online communities, with implications on their pedagogical practices and professional learning. We discuss teacher educators in a global and digital landscape, and then we discuss the findings of our study.

2. Teacher educators: global shared responsibilities

Teacher educators and their professional learning is becoming more complex and challenging. Indeed, as for many others working areas, professional development has become a critical dimension for supporting increased specialisation, new forms of organisation and the agile transformation of work outputs (Littlejohn & Hood, 2017). New challenges are open also for professional learning of teacher educators because of rapid societal changes and the spread of technology (Ludvigsen, Lund, Rasmussen & Säljö, 2010). In this changing context, according to the three-stage model of professional learning outline by Simons and Ruijters (2004), teachers and teacher educators have to (1) elaborate work competencies theoretically and in practice; (2) expand theoretical knowledge and insights by learning explicitly from and through research; and (3) externalise practical and theoretical insights, which means contributing to the development of the

profession and/or to team and organisational learning. The development of their expertise constitutes an important issue, considering their leading and modelling role in assuring quality and the introduction of technological and pedagogical innovation.

Today, professional development stresses the role of the collaboration between context and professionals who structure a mutual enrichment (Darling-Hammond & Richardson, 2009) and triggered processes of negotiation, shared goals, resources and new modality of action (van As, 2018). The potentiality of the collaboration is strengthened when mediated by technology, such as online communications and social networks. Digital technologies and social media increase continue exchange and collaborative actions with peers, which could impact professional learning.

3. Teacher educators in digital landscape

Teacher educators are immersed in the abundance of web resources and repositories, creating and sharing knowledge on different platforms, and communication through available online tools. Social media refers to a wide range of applications that enable users to create, share, comment and discuss digital content. Social networking sites, blogs, wikis and multimedia platforms are amongst the applications typically included in the social media landscape (Tess, 2013). Also, social networks have become a space for sharing open educational resources (OER), which are considered by the classic definition of the Organization for Economic Co-operation and Development (OECD) (2007) «digitised materials offered freely and openly for educators, students, and self-learners to use and reuse for teaching, learning, and research. OER includes learning content, software tools to develop, use, and distribute content, and implementation resources such as open licences».

Through social media communities, which are expanding in a capillary manner, teacher educators could engage in collegial discussions and share experiences related to their profession. Indeed, an increasing number of teacher educators have started to engage in pedagogical discussions in various online professional communities worldwide (Rodesiler, 2015). Participation and collaboration in social media are favourable for discovering, discussing and suggesting methodologies, tools, and solutions already experimented by the peers. Educational researchers have, therefore, started to explore the impact of teachers' participation in social media and online professional communities for professional learning (Bodell & Hook, 2011; Maciá & García, 2016). The use of online professional communities is considered to have the high potentiality for professional learning (Manca & Ranieri, 2017).

A relevant perspective to unlock the potential of social networking sites for professionals is provided by the concept of 'network of practices' (Brown, Collins & Duguid, 1989). A network of practices implies a set of individuals who are connected through social relationships, whether these relationships are strong or weak. Terms such as community tend to denote a stronger form of relationship, whereas networks refer to all networks of social relationships. The term practice represents the substrate that connects individuals in their networks. A network of practice is oriented towards sharing experiences and building shared solutions for problematic situations. Considering this perspective, in this article, we consider that teacher educators in the rapidly growing use of technology, such as Pakistan and Bhutan, adopt and use social media, digital resources and professional online communities as an engine of professional learning.

4. The need of international perspectives from the South

The former colonial nations of the nineteenth and twentieth centuries – the rich countries of Europe and North America – are generally called the Global North, which are still central in the knowledge economy. However, new knowledge process is also involved in the South. Indeed, globalisation and new technology have changed the ways that knowledge is made, disseminated and consumed.

The Global South is an emerging term that refers to countries seen as low and middle income in Asia, Africa, Latin America and the Caribbean by the World Bank. We use this term to stress the peculiar perspective that the two selected countries could propose.

4.1. Overview in Pakistan

In Pakistan, there are about 135 educational institutions employing 36,563 teacher educators. Amongst these, 114 institutions were established in the public sector and 21 were set up by the private sector. Although in the recent decades, there has been considerable expansion in the field of teacher education in Pakistan, the quality of teacher education still needs improvement through the introduction of innovative strategies and practices, together with economic and social recognition. Pakistan's National Education Policy (1998–2010) also observes 'the qualitative dimension of teacher training program has received marginal attention resulting in mass production of teachers with a shallow understanding of both the content and methodology of education' (Government of Pakistan, 1998). The government's budget for education is still very low, especially when compared with the 20% recommended by the UNICEF (United Nations Children's Fund) and the 6% agreed upon in the Dakar Framework of Action at the 2000 World Educational Forum.

Attention has recently been increasing on the opportunities created by technology and their implications for economic and social growth.

The results of a UNESCO (2017) report on female teachers in early childhood education in Pakistan were quite encouraging, because the teachers had learned and approved of mobile technology as an innovative teaching skill in an auspicious environment. Social network platforms are frequently used; there is easy access to high-speed Internet and mobile broadband (3G, 4G Long-Term Evolution [LTE]) in rural and urban areas of Pakistan. The national research has shown that social media has influenced the performance of teachers. Hassan and Sajid (2012) have mentioned that, although the teachers feel the urgency of technology integration in education for self-directed learning, they face challenges regarding the use of technology in the teaching process; these barriers are mostly related to the training of teachers and lack of technical skills in many areas.

4.2. Overview in Bhutan

Bhutan is a small landlocked country with a democratic, constitutional monarchy in South Asia. Until the 1950s, education in Bhutan was mainly monastic, and during the 1950s, the first secular schools were opened. Education holds an important place in Bhutanese society and is given priority in developmental activities, in line with the country's philosophy of Gross National Happiness. A system of non-formal and monastic schools is active. The government provides free education to all students until Grade 10, with 11 years of basic schooling (Ministry of Education, 2014). Samtse College of Education was established in 1968 as the country's first Teacher Training Institute under the aegis of late His Majesty the third king, Jigme Dorji Wangchuck.

Educational technology research is a new field of research and ICT in Bhutan (Jamtsho, 2007; Kinley, 2016). The spreading of computers, telephones and the Internet has further accelerated the communication commerce systems in the country (CERD, 2002), resulting in rapid social and economic change. Despite the delayed introduction, large sections of the population have rapidly adopted ICTs, especially mobile devices. This dissemination has triggered changes and new opportunities, also in school and university. Both teachers and students make use of technology such as computers, projectors, Internet, laptops and mobile phones for personal purposes, as well as to enhance teaching and learning (Kinley, 2016). According to Ura, Alkire, Zangmo and Wangdi (2012), the use of ICT as the main tool for teaching and learning is more prominent in university and high school than primary schools, because of the existence of adequate ICT facilities. To integrate Information and Communication Technologies in teaching, lecturers were specifically trained, with international collaboration, for example, refer to the international project 'Blended Learning in Teacher Training between Asia and Europe' (<http://blteae.eu/> - on which researchers involved in this study are all active partners).

Considering the peculiar socio-cultural condition in these two countries, both representative of the changing and challenging Global South context, the analysis will focus on digital practices in teacher educators.

5. Methodology

5.1. Aim of the study

The focus of this article is on teacher educators' professional learning and how they are using digital resources to engage in learning experiences. Specifically, the research question is: how do Pakistani and Bhutanese teacher educators use social media, digital resources and professional online communities to engage in learning experiences?

This study gives a contribution to know better teacher educators from Global South perspective. A brief general context of the two countries is proposed below.

5.2. Collect and analysis of data from Pakistan and Bhutan

To answer the two research questions, we explored the views of teacher educators from Pakistan and Bhutan through the instrument of an online questionnaire and interviews.

The questionnaire (see Appendix) was adopted by the combination of the previews versions by Tosato (2013) and Moran, Seaman and Tinti-Kane (2012). These two questionnaires investigate the teachers' use of social media, OER and online communities, in line with our research questions. The number of the open questions is 30, with the first section about autobiographical data, followed by inquiry on the use of OER and community participation. The format of the questionnaire was distributed online via email to three different departments of a public university in Pakistan and to the royal university in Bhutan, thanks to the role of the two co-authors of this study. The sample composed of teacher educators in a different subject and different seniority. Survey volunteer respondents were invited to participate in a short semi-structured interview. The interview format is based on the same structure of the questionnaire, with the aim to have deeper answers and enrich the analysis. The questionnaire was analysed with the descriptive statistic.

The narrative interview is a process that involves reflection of the selected experiences and events in order to become an integrate process of construction in making meaning of experiences (Atkinson, 1998; Watson, 2006). The interview, after been transcribed, was analysed with content and thematic analysis (Charmaz, 2006; Neuendorf, 2016), to select

relevant information. Three main categories were used to categorise the verbatim: social media, use and creation of OER and participation in online communities.

So a mixed method is applied to the data (Creswell, 2003). In the study, the nested mixed design, one of the typologies proposed by Clark, Creswell, Green and Shope (2008) was used. Quantitative and qualitative data were nested to support each other and used in integration. The questionnaire and the interviews are proposed as complementary data, to reach an overview about the teacher practices with digital resources and community. The triangulation of data is made by the exploration of selected online social groups.

The choice of the two countries is justified by their differences in term of culture, religion, history and educational system, combined with their common growing use of technology in teaching and learning. Also, this study is based on the direct collaboration of two co-authors from Pakistan and Bhutan, also senior teacher educators in their respective country.

5.3 Participants

The total number of participants is 91 teacher educators.

In Pakistan, 64 teacher educators (48.4% women and 51.6% men; 15 aged 20–30 years; 30 aged 30–40 years; 12 aged 40–50 years; 7 aged >50 years) completed the online questionnaire. The educational qualifications of the participants included doctorates (44.3%) and master's degrees in humanistic subjects (42.6% total; 18.30% art and design; 16.7% language; 11.7% society; 11.7% economy and law). From this sample, 14 teacher educators (11 women and 3 men) were available to participate in an interview.

In Bhutan, 27 teacher educators (7.4% aged 20–30 years; 59.3% aged 30–40% years; 33.3% aged 40–50 years) completed the online questionnaire; of these, 6 were women and 21 men. Of the respondents, 56% had a master's degree and 66.7% worked in universities, 22.2% in secondary schools, and 11% in elementary school with university collaboration. Major subject areas included language (23%), physics and math (23%) and art and design (19%). From this sample, eight teacher educators (4 men and 4 women) were available to participate in an interview. Table 1 presents the summary about the participants.

Table 1. Summary of the participants

Teacher educators participants	91 teacher educators in total (of which 22 for the interviews – 15 women and 7 men)
Sex	48.4% women and 51.6% men
Age	Aged 20–30 years = 17 Aged 30–40 years = 46 Aged 40–50 years = 21 Aged 50 years = 7

In the following, we will present and discuss the results.

6. Results from Pakistan

In the following section, we present the results from the questionnaire, supplemented by exemplary extracts from the interviews. To answer the research question, the data will be organised into three sections: digital media in teacher educators' practices; use and sharing of OERs and participation in online communities.

6.1. Digital media in teacher educators' practices

From the survey, with a total of 64 responses, the main social networking media used was WhatsApp (70.3%), followed mainly by Facebook, Instagram, Research Gate, LinkedIn and Twitter. Teacher educators considered WhatsApp as an effective social media tool because students have easy access to this application. Teachers have been using it for a long time (i.e. 'I have used WhatsApp since 2016 with my students') because of the ability to communicate freely with them ('I can share important information related to their subject with them') and the application's positive impact ('I feel students use the WhatsApp activities excitedly'). Particular attention was given to the personal relationships that this application made possible ('It's a good app and students feel more confident that they can reach me any time. They can also share and discuss any concern/confusion about assignments and dates. There is however a trend that people start forwarding unconcerned messages').

From the interviews, it emerged that the teachers used WhatsApp in combination with a variety of other technologies (WhatsApp, reflective videos, power point slides, using internet search engines, reading e-books and online blogs), including e-mail, online activities for students and YouTube. Teachers were attentive to the exploration of new tools ('I have used YouTube video clips, video lectures, feature film, and WhatsApp during class. I have just started using Google Classroom to incorporate eLearning. I plan to incorporate Google Forms in the classroom for formative assessments') and were using it actively in the classroom (Different links are opened in the class to explain the topic').

In terms of motivation for the use of technology in learning, the teacher educators were aware of the rich opportunity for instruction ('In my opinion, use of technology in classroom brings a sense of novelty and grabs their attention. Students learn when they are attentive. Thinking deeply however requires exercise of reflective thinking with or without technology'). Teachers educators were shown to have made qualitative use of technology in education ('I have been integrating technology in teaching since 2008. I have observed that students are fully involved in learning when we integrate technology. For example, when we use multimedia slides or when some video clips are shown for learning purposes'), with attention to the suitable integration of technology in teaching. Concerning modality, the teacher educators proposed a focus on reflective practices ('Students' reflective thinking power is developed by watching video clips', 'If students watch a movie of video lecture, they are given a small questionnaire to express their opinion about the content as well as the concepts discussed. This activity can be for individuals or in Think-pair-share methodology').

6.2. Use and creation of OER

The teacher educators noted the utility and potentiality of OER, as one respondent observed: 'I think online educational resources are the major source of learning for students. Students have free access to such resources. There are free online education journals and students can get their papers published free of charge. Students are too excited to know about free online education resources'. When researching OER, 62.5% used a search engine such as Google, 18.8% used social networks and 9.4% used a specialist database. In line with the research, teachers stressed the importance and the quality of the OER ('I like using online sources as they are more current but these have to be scanned for their accuracy. Internet is a free source and anyone can publish whatever. Students have to be guided to choose reliable sources').

Many of the impediments to the use of OER in the developing world are the same as those in developed countries (Abeywardena, Karunanayaka, Nkwenti & Tladi, 2018), including lack of time, lack of incentives, lack of capacity (both technical and financial) and fear of loss of control ('Connection issues still are a cause of concern but time management can overcome some of it') and the formative role in the use of it ('They get comfortable when they get used to it and are encouraged'). Sharing educational resources inside the work community (in which 91% of respondents participated) mainly took place through email (67%) and Facebook (54%).

Of the respondents, 90% thought that belonging to an online community helped to share and create new educational resources. This confirms that teachers who participated in a community formed by a selected group of users were in fact more likely to share their own resources and teaching experiences. The more confident teachers became, the more they are willing to and they collaborate and share their materials with their community. The main tool for online sharing of educational resources in the working community was email (63.5%) or Dropbox and Google Drive (23.8%).

6.3. Being members of online communities

From the answers to the questionnaire, 78.1% of Pakistani teacher educators declared to be members of an online professional community; of these, 75% joined the online community to ask and answer questions or comments. When asked for an example of an online community, 46% responded with a Facebook group and the remainder with a combination of Facebook groups, WhatsApp and closed institutional groups. Concerning the features of the online community, 49% were international, 35% national and 28% belonged to the institution where the teacher worked. In response to an open question on the reasons for joining a professional online community, the respondents identified four primary motivations: exchange and share knowledge for professional growth in teaching; international exposure and being aware of the circumstances and politics of Pakistan and globally; to engage in research, including free articles and interesting discussions; and for the pleasure of joining and being part of a community during their free time.

When they considered the benefits of joining an online professional community, 83.9% of respondents noted that they were developing new skills as a result of such participation. These skills included professional learning practices such as interacting internationally, changing research methods and modes of thought, participating in collaborative work, joining in the academic discourse and exploring new areas of research with the latest software, but the benefits also included mental health and awareness about religion, socialising skills and getting to know people well. The active participants in online communities felt that it allowed them to move towards direct personal change (e.g. 'I was not able to communicate with other before I joined the community, but now I feel better').

When asked how these skills were developed, the answers included sharing, asking and thinking about the content shared (e.g. 'By reading everyone's interaction style' or 'By asking various queries and problems'), and 86.7% of respondents considered that being part of an online community has had an impact on their professional work. Of these, 62% considered the motivation was in having access and gaining more advanced educational resources and 35.8% prioritised getting help through more discussion with colleagues. For those who considered that participation in an online community did not have an impact on their work, 55% thought that 'I perform my work well and not need to learn in online community'.

More than three quarters of respondents (76.3%) affirmed that they shared what they had learned online with their local working community. Teachers wove a network of communication between their personal working networks and the online networks, thanks to the sharing of resources and knowledge between the two networks. The main motivation for

sharing was that they felt the information needed to be shared and that it is good to share ('I think new knowledge should be shared and I share it through email and Facebook' and 'Sharing is caring. Knowledge is not my personal possession. I prefer to share it because this is how I learn more. I teach for free to students around me'). Teachers also felt there were direct positive implications for sharing in terms of professional and student development ('I am applying these techniques to my research work and also share with my research students').

7. Results from Bhutan

7.1. Digital media in teacher educators' practices

There were a total of 27 responses to the survey. On the basis of these responses, the main social media sites used were Facebook (57.7%) and ResearchGate (11.5%). On the basis of the interviews, it emerged that teachers also used some online application to improve their teaching, such as YouTube ('I download the YouTube videos and show them to my students. It helps them understand concepts in a deeper way') and Google App ('I use Google classroom to assess learners' work. I sometimes post Google Forms with multiple-choice questions to check my students' understanding level'). However, the use of the online Google suite was dependent on the availability of an Internet connection ('I use Google classroom every day before mid-term and rarely used after mid-term due to lack of internet connectivity in the lab').

7.2. Use and creation of OER

When researching OER, 55.6% used search engines such as Google or Bing, whereas 37% used specialist databases. The teachers paid attention to the quality of online resources ('The latest online resources help me update the learners with the correct and valid information'). Teachers also went to find specific resources to support their professional learning, which included attending massive open online courses (MOOCs: 'I have been enrolling myself in MOOCs to learn and develop my skills. I have been able to download resources once I get enrolled. I use relevant resources to teach in the class') and reusing resources when teaching ('I have already downloaded the useful resources I found as I did some course'), depending on the specific subject matter ('When I teach a Phonetics module in autumn semester, I make use of the sound section of the BBC Learning English website').

Concerning the sharing of educational resources inside the work community, 92.3% said that they did share resources, and most of them shared resources via email (66.7%). The sharing of resources was also quite personalised ('I use email to receive and send my resources from/to friends. I usually send and receive math worksheets from/to friends. These worksheets sometimes help me design my lessons in a different way'). All of the participants thought that belonging to an online community helped to share and create new educational resources ('When we visit online educational websites, we get new ideas from different parts of the world. This motivates me to create new and better ways of teaching in the class based on the ideas that are gathered from different sources').

7.3. Being members of online communities

Of the participants who completed questionnaires, 88.9% were members of an online professional community and also used these applications to involve students («Look for search engines and find the relevant online community for enhancing the skills and knowledge of the subject. I mostly used WeChat for teaching online learners»). Most of the participants (75%) joined an online community to raise and answer comments. Concerning the features of the online communities, 55.5% were inside the institution where the teacher worked, 22% were national and 18% were international. The generic activities performed were reading and community participation (74.1%) for information sharing and professional purposes; other activities included awareness, updating and partnership and research collaborations. One teacher considered that «online community forums help us to connect to the changing world community and update ourselves with latest information».

More than three quarters of the respondents (77.8%) considered they were developing new skills by joining an online professional community, although 14.8% thought that they were not. Skills learned included the ability to use new online applications and generic ICT skills, and these were learned through the use of applications and ongoing interactions. The majority (92%) affirmed that they shared what they had learned from online communities with their local working community to bring new ideas, stay updated and apply new approaches in the classroom.

Most of the respondents (96.3%) considered that being part of an online community had an impact on their professional work («to discover unknown or un-tapping potential, to facilitate decision making around which practices to change or maintain, and to learn how other have overcome similar challenges»). Of these, 69.2% considered the motivation was to have more access and to get more advanced educational resources, whereas 30.8% highlighted having help in through more discussion with colleagues. The link between the quality of resources and being part of an online community was well expressed by one teacher, who noted «The future certainly belongs to the person who uses the online resources. The regular users not only use these resources but also constantly provide feedback to make them better and easier to use (...). The downloaded resources (or the links) do not remain with one user but it is multiplied through various social media

groups. In this way, it reaches out to so many users. So, I believe that belonging to an online community helps sustain the creation of online resources».

Table 2 presents an overview of the trends from both the countries:

Table 2. Overview from both the countries about online trends by teacher educators.

	Main features
Social media	Easy access and to support personal relationship Dependent on the availability of an Internet connection
Use and creation of OER	Resources are shared via email and personal networks Need to be personalised for the teaching
Participation in online communities	Space for sharing information and pedagogical resources Active involving in online professional discussions

From the data, we can observe how Pakistani and Bhutanese teacher educators interact on social media, share digital resources and adopt online communities as sources of professional learning and pedagogical transformation.

8. Discussion

In this article, we were interested about Pakistani and Bhutanese teacher educators' use of social media and digital resources in teaching practices and participation in professional online communities and exploring the implications of this use in their pedagogical practices and on their professional learning. This study gives a contribution to know better teacher educators from Global South perspective and oriental countries less explored (as shown in the recent work of Zawacki-Richter & Qayyum, 2019, which focus on China, India and South Korea perspectives). Specifically, we focused on three areas, teacher educators' use of social media and use and sharing of digital resources and participation in online communities, which we will discuss below.

The main social media applications used by teacher educators were WhatsApp in Pakistan and Facebook in Bhutan. In general, the use of social media responded to the acquisition of social capital, considered as the set of current or future resources related to the possession of a durable network of more or less institutionalised relations of knowledge or mutual recognition (Bourdieu, 1986), whose value was recognised by teachers. WhatsApp made a form of social bonding possible, with a network structure composed mainly of strong and stable bonds based on emotional support and benefits from a close group of colleagues and students. The use of other types of communities (such as Facebook groups) made possible the expression of social capital of the bridging type, which is commonly composed of weak and occasional ties. Some social networks, such as Facebook, that were born primarily for the purpose of socialisation, have now become oriented towards professional use, phenomena called «professional facebooking» (Manca & Ranieri, 2017). Indeed, research about Facebook shows how teachers participate mainly for sharing and professional support (Fox & Bird, 2017) and for the purposes of identity positioning (Lundin, Lantz-Andersson & Hillman, 2017). In both countries, email was used to exchange useful information and maintain social capital, creating a network of bonds that was maintained over time. Bridging and bonding both have a positive role within communities of individuals in so far as they facilitate coordination and cooperation for mutual benefit, including the exchange of resources, personal and professional relationships and implications for psychological well-being (Ellison, Steinfield & Lampe, 2011).

On the use and sharing of OER, the utility of free access resources was acknowledged by teacher educators from both countries, who searched and shared on social networks, although they noted the difficulty in finding resources of quality. Indeed, numerous studies (e.g. on Sri Lanka, Botswana and Cameroon, see Abeywardena, Karunanayaka, Nkwenti & Tladi, 2018) have re-evaluated the importance of the context in which an educational resource is inserted, as well as the need to adapt it to the linguistic, cultural and institutional settings. Larson and Murray (2008) considered that the greatest challenge for OER initiatives in the developing world is working with educators to collaboratively build effective OER delivery in areas where bandwidth and technology are limited. OER are potentially major educational tools that accelerate the blurring of formal and informal learning, with great implications as a tool for social change (Santos, Punie & Muñoz, 2016). Belonging to an online community and the sharing of OER appeared in both the countries considered, and these also helped the evolution towards open educational practice (Littlejohn & Hood, 2017). The value of sharing was important to the teacher educators: indeed, knowledge and skills have a social life that originates and can be distributed in social interactions that leads to collective learning.

Concerning collaboration and participation in online communities, teacher educators declared that they sought to develop skills, oriented towards content in Pakistan (new pedagogical methods) and process in Bhutan (ICT skills; research tools). This is in line with the findings of Davis (2015) that online interaction supported teachers when looking for new ideas and applications. Collaborative practices amongst teachers may become the precursor for the restructuring of ideas or experiences and the development of new resources. According to the classical studies of Doise (1982), social variables are defined at the intrapersonal, interpersonal, group and cultural levels. Collaborative practices oriented to the exchange of resources and online knowledge make possible a link at the interpersonal, group and cultural levels, including the exchange with colleagues in the local working community.

9. Conclusion

We consider that the main contribution of this article is to have observed the use of social media for the professional learning of teacher educators in social and cultural contexts – Pakistan and Bhutan – less explored in the literature. The main limitation of this study was the limited sample size, which means that the results from this specific sample may not generalisable to all teacher educators or teachers in the two countries. However, the article gives a glimpse on teacher educators' practices about digital use in a Global South perspective, which we consider valuable contribution aside from the occidental mainstreaming research context.

Teacher educators from Pakistan and Bhutan have both great interests in joining in social networks and online professional communities for their professional developing and aware of the potentiality to improve the quality of teacher education through an extended and international discussion. Indeed, in a hyper-connected world, the initial and continuing teacher training proposed by higher institutions remains somewhat limited to national borders, with a need to meet the emerging challenge of increased openness and cross-institutional collaboration, both formal and informal, amongst higher education institutions and practitioners (Inamorato dos Santos, Punie, Castaño-Muñoz, 2016; Nerantzi, 2018). Consequently, teacher educators often deal with the national perspective and are not incentivised to confront international issues. More structured use of social networks through formal teacher training could be a strategy to tackle common issues in a wider and more complex vision of teacher professionalism for both developed and developing countries. Global South teacher educators could propose their special perspective outside of the mainstreaming occidental perspective (such as Bhutan that embody the concept of Gross National Happiness in all level of education and teaching). A more intensive international exchange of learning by teacher educators will contribute to shared increased professionalism (Snoek et al., 2011). For this, it is important that teacher educators be exposed to innovative training, with an international and intercultural perspective.

In sum, from this study, we argue that the quality of teacher educators training in different parts of the world – and in this case, from Pakistan and Bhutan – could be nourished by the intense exchange of information and the growing rhizome-like expanding system (McIntyre, 2012) of connections amongst people, knowledge and communities. Understanding how to maximise the potential of connecting other communities of teacher educators, professional and institutions via these media is still an open challenge. With an active engagement in social media and online professional communities, teacher educators make connections and support a form of serendipitous learning and knowledge sharing (Saadatmand & Kumpulainen, 2013; Soomro, Kale & Yousuf, 2014). This online engagement opens a 'charting of collective knowledge' (Littlejohn, Milligan & Margaryan, 2012), which helps the individual to connect with the collective. This will lead teacher educators to accept external collaboration outside from national borders, involving new perspective into their daily practice and developing the pedagogical practices and digital competencies necessary to face the new challenges of the knowledge society.

Authors' contributions

The first author is responsible for the conception, data analysis and writing process. The second and third authors contributed to the collect of data and final revision.

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