

AN ALGORITHM FOR ENHANCING PROFESSIONAL DEVELOPMENT AND QUALITY ASSURANCE IN TEACHER EDUCATION

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Abstract

The exploration of professional communities' role in elevating the standard of teacher education remains a nuanced endeavour. Despite a surge in research focused on professional communities and the development of teacher educators, numerous challenges persist in crafting a more action-oriented approach. This article aims to address the issue by introducing a systematic process or algorithm designed for professional communities. The proposed framework not only supports the continuous professional growth of teacher educators but also enhances the overall quality of teacher education. Through the integration of theories related to the identity of teacher educators, professional development, and professional communities, this study seeks to provide a thorough understanding of how a predefined algorithm can steer teacher educator communities towards successful collaboration, ultimately contributing to the improvement of quality in teacher education. Adopting a qualitative research design for data collection and analysis, the study unravels insights into how a teacher educator's personal and professional needs, as well as significant challenges in their work-life, can be met through active participation in a professional organization. The results underscore the symbiotic relationship between individual growth and collective efforts within a professional community, shedding light on the transformative potential of such collaborative endeavours. In essence, this research advocates for a structured algorithm as a catalyst for the positive evolution of teacher educator communities, ultimately fostering a conducive environment for continuous improvement in teacher education quality.

Keywords: Teacher Educators, Professional Development, Teacher Education, Quality Of Teacher Education.

INTRODUCTION

Teacher educators play a crucial role in the education system and significantly impact the quality of teacher education (Lunenberg et al., 2007; Smith 2003; Vanassche & Kelchtermans, 2016). This article aims to elucidate the challenge of enhancing quality in teacher education by formulating an algorithm for the functioning of professional organizations of teacher educators. The dynamic professional identity of teacher educators encompasses roles such as teacher, scholar in teaching, collaborator, leader, and learner (Klecka, Donovan, Venditti, & Shoot, 2008). Teacher educators shape their professional identities based on the educational context in which they operate (Swennen, Jones, & Volman, 2010). The intricacies associated with these professional roles highlight the significance of ongoing professional development for teacher educators. Continuous professional development is imperative for all teacher educators due to variations in their qualifications upon entering a career in teacher education (Levine, 2011; Cochran-Smith, 2003; Murray, 2008). Consequently, professional organizations become vital for disseminating continuous learning among teacher educators and contributing to the induction of new professionals in the field (Swennen & Bates, 2010). Teacher educators must be adept at understanding and addressing the distinctive behaviours, beliefs, and needs of student teachers,

preparing them for their roles as professional educators (Levine, 2011). Therefore, the professional development of teacher educators is crucial for their effectiveness in teacher education institutions, and the support of professional communities is recognized in this progression (Swennen & Bates, 2010).

Teacher educators recognize the significance of professional organizations, yet their comprehension of the distinct contributions to the professional growth of teacher educators and the enhancement of teacher education quality remains limited. While it is widely acknowledged and documented that professional organizations play a crucial role in elevating the quality of teacher educators, there exists insufficient understanding regarding the ways in which these organizations contribute to the development of the professional identity of teacher educators, tackle issues in teacher education, support ongoing learning, and assist in the initiation of new teacher educators. Few recommendations exist regarding the functioning of these professional organizations as a means to enhance the quality of teacher education (Snoek, Swennen, & Klink, 2011). This article suggests a procedural framework for the operation of professional organizations for teacher educators as a means to advance professional development, provide assistance during the induction of teacher educators, and promote the adoption of innovative practices in teacher education. The study employs an explorative case study on a teacher education community, involving thirteen teacher educators. The study seeks answers to the following questions: What are the objectives and goals of these professional organizations of teacher educators, and what methods do they employ to achieve these goals? How does the attainment of these goals assist teacher educators in their educational contexts? Furthermore, the study explores the individual needs and challenges that teacher educators encounter when participating in these professional organizations.

Teacher Educator

Teacher educators play a significant role in shaping the quality of teacher education, as evident in the preparation of new teachers (Lunenberg et al., 2007; Smith, 2003; Vanassche & Kelchtermans, 2016). The dynamic professional identity of teacher educators encompasses roles such as teacher, scholar in teaching, collaborator, leader, and learner (Klecka et al., 2008). The development of their professional identities is influenced by the educational context in which they operate (Swennen, Jones, & Volman, 2010). The professional development of teacher educators is crucial for enhancing the professional learning experience of aspiring teachers. It is crucial for the teaching profession to adopt and implement innovative learning practices within the societal context, especially during the training of pupil-teachers (Deka, 2014). The concept of professionalism in teaching can be examined by comparing it with other professions like medicine or law, highlighting both similarities and differences. Another approach emphasizes the expectations in today's neoliberal, competitive knowledge society, outlining standards for professional performance, public accountability, lifelong professional development, collaboration, and involvement in innovation (Snoek et al., 2011; Swennen, Jones, & Volman, 2010; Swennen & Bates, 2010).

Fundamental values of professions, including education, are linked to the power dynamics between professionals and clients, such as teachers and students (Lunt, 2008). Professional development is viewed as systematic, and the formation of professionals is shaped by opportunities within daily workplace activity systems. Neglecting the professional development of teacher educators not only impacts

teacher education but also leaves the educational system lacking in research and documentation (Smith, 2003). Establishing an inherent knowledge base for teacher educators can guide their professional development (Snoek, Swennen & Klink, 2011). Several measures can contribute to the professionalism of teacher educators, including standards, ethical codes, formal education programs, induction programs, resources for continuous professional development, participation in networks, development of a practical knowledge base, and research on the quality of teacher educators (Snoek, Swennen, & Klink, 2011). Deka (2014) emphasizes the necessity of professional development for teacher educators in India, stating that it is essential to facilitate the teaching-learning process and address the expectations, challenges, and issues of the teaching profession.

Shulman and Shulman (2014) delineate professional development at two distinct levels: individual and collective. On an individual level, it encompasses introspection into personal visions, motivations, theories, and practices. At the collective level, it extends to the cultivation of a shared vision, acknowledgment of a professional knowledge base and standards, and integration into a community of teacher educators bound by a common commitment. The professional development initiative seeks to achieve a dual purpose of imparting theoretical knowledge and models while facilitating a shift towards professionalism rooted in a community-oriented framework. It seeks to transform teacher educators' stances from constrained tentative professionalism to a more comprehensive professionalism embedded in reflective practices and self-study (Kennedy, 2005; Evans, 2008; Vries, Swennen, & Dengerink, 2020). Researchers examining in-service teacher education to foster the professional development of teacher educators emphasize the role of teacher educator organizations in improving teaching practices. They also underscore the importance of identifying strategies that can support teachers in collaborative endeavours.

Professional Organizations

To comprehensively grasp the exceptions, challenges, and issues within the teaching profession concerning the changing needs and demands of contemporary society, it is crucial to actively participate in diverse educational activities. These activities may include training programs, research projects, seminars, workshops, and extension perspectives (Deka, 2014). Participating in professional networks is a widespread practice and is recognized as a significant driving force for enhancing professionalism (Levine, 2011), as it facilitates involvement in diverse educational endeavours. A professional community is a collective of individuals within the same profession who engage in ongoing collaboration to enhance their service to clients (Grossman, Wineburg, & Woolworth, 2001). Examinations of research on teacher professional organizations consistently highlight that certain characteristics play a crucial role in fostering learning and improving professional practice. Notably, perceived features of professional organizations contribute to the improvement of their effectiveness. Crucial features of professional organizations for teacher educators involved in supervising student teachers include norms fostering collaboration, trust, and familiarity; activities that open up private practices; access to logistical information and shared expectations about the role of supervisors; and dedicated time for collaboration (Levine, 2011). This framework enables the onboarding of new teacher educators and supports the activities of in-service teacher educators.

An emerging area of focus is the learning of experienced professionals, emphasizing community-based learning to elevate the quality of teacher educators (Snoek, Swennen, & Klink, 2011). Encouraging “continuous professional learning” within the workplace’s environment, practice, and challenges is crucial (Webster-Wright, 2009, p. 702). Teacher education programs should play a proactive role in fostering continuous learning among teacher educators. This can be achieved through the creation of professional organizations dedicated to teacher educators, aimed at facilitating their ongoing professional development. Strengthening professional organizations can positively impact the induction of new teacher educators, thereby enhancing individual teacher educators’ professional practices over time. Research on teacher professional organizations underscores that the social norms, collaborative activities, beliefs, and shared trust developed among professionals significantly influence their interactions with each other and their clients (McLaughlin & Talbert, 2001; Grossman et al., 2001).

Moreover, professional associations provide teacher educators with global prospects, including engagement in international networks or projects, participation in global research initiatives, attendance at international conferences, and integration into worldwide professional communities. In addition to these international opportunities, there are also chances closely associated with daily professional activities, such as joining local associations of teacher education institutions and schools. The advantages of participating in such networks are evident (Snoek, Swennen, & Klink, 2011) and practical in enhancing the quality of teacher education. In this paper, we suggest a constructive approach for teacher educator professional organizations to elevate the professional standards of a distinct group of professionals, thereby contributing to the overall enhancement of teacher education quality. There is an increasing need for the exchange of policy practices and mutual peer learning among teacher educators and their professional associations regarding issues related to the professionalism of teacher educators (Snock, Swennen & Klink, 2011).

CONTEXT AND METHODS

The study employed a qualitative case study methodology, chosen for its effectiveness in delving into the intricacies of the human experience (Erlingsson & Brysiewicz, 2017). To gather data, qualitative tools such as a semi-structured interview schedule and field notes from observations were utilized. The organization and analysis of the collected data were facilitated through the application of Ritchie and Spencer’s Framework Model (2002) as outlined by Bastin (2020). Engaging in case study research contributes to the development of expertise among researchers, given the flexibility inherent in this approach, allowing for a thorough exploration of research questions. The value of in-depth observation lies in its ability to capture and analyse comprehensive information within the authentic context of real-life situations in real-time, enhancing the significance of case study research. The primary aim of the qualitative study is to systematically distil a substantial volume of textual data into a well-organized and concise summary of key findings (Erlingsson & Brysiewicz, 2017). Consequently, the study is organized around three main themes, with the algorithm or procedure governing the functioning of professional organizations falling under the second theme. Notably, the study delves into the process guiding the operation of professional organizations in enhancing quality within teacher education.

Site

Universities in Kerala offer esteemed teacher education programs that confer teacher certification exclusively through a two-year Bachelor of Education (B.Ed.) degree program. This comprehensive program encompasses coursework and practical teaching experience. The assessment of student teachers involves both written tests and evaluations of their practicum classes, including observations. Teacher educators engage in collaborative discussions, both within their academic institutions and through participation in professional organizations. These forums provide a platform for sharing experiences, addressing challenges, and refining teaching practices. The significance of professional organizations as instrumental facilitators in the professional development of teacher educators, contributing to the enhancement of their instructional methods, becomes evident in these interactions. The following descriptions capture insights gained from conversations with Teacher Educators actively involved in these professional organizations.

Participants

The Teacher Education program typically engages 10-15 teacher educators specializing in various disciplines such as science, mathematics, language, and social science. They are integral members of the institutional community, actively participating in discussions concerning challenges and solutions within the institution. Many of these educators are also affiliated with professional organizations external to the institution, which they perceive as conducive to their professional development. The study focused on teacher educators who are active members of a professional community beyond their respective institutions.

The interviewed participants included 3 retired teacher educators, 2 principals of teacher education institutions, 6 seasoned professional teacher educators, and 2 novice teacher educators. All educators possessed a minimum of five years of teaching experience in their respective subject areas, with the majority having considerably more. Nearly all teacher educators had been part of the professional community for over five years, except for the two newcomers to the program. The names of individuals and places have been altered to safeguard participant identities.

Researcher's Role

Before undertaking the study, the researcher was a member of a professional community that was active in Kerala. The executives of this community responded positively to the study, acknowledging that it provides insights for enhancing the functioning of these organizations.

They actively assisted in gathering and analysing data, contributing to both program evaluation and research. Employing a semi-structured interview approach (refer to the Appendix), the researcher conducted recorded interviews with thirteen teacher educators. The aim was to investigate how they defined their role, their sentiments towards their work, the support they received or lacked in their roles, and how their colleagues influenced their work.

DATA ANALYSIS

To scrutinize the interviews, the responses of all supervisors were transcribed onto a matrix. Along the rows, we systematically examined the answers to the 13 questions and their sub-questions, while across the columns, we scrutinized the responses from each teacher educator. The collected data from this research were extensive and required a systematic approach for efficient organization and analysis. Yin (2018) underscores the challenge of analysing case study data, emphasizing that "the analysis of case study evidence is one of the least developed aspects of doing case studies" (p. 165). In the pursuit of a robust process, various sources were consulted that provided a range of analysis methods (e.g., Creswell, 2003; Yin, 2018). Through this exploration, the Framework Model (Ritchie & Spencer, 2002) emerged as the most suitable method for this study.

The examination of interview data employed the Framework Model by Ritchie and Spencer (2002). Gale, Heath, Cameron, Rashid, and Redwood (2013) endorse the Framework Method as a valuable tool for data analysis, stating that it provides clear steps to follow and produces highly structured outputs of summarized data. Ritchie and Spencer delineate five stages in this analytical process: (a) familiarization, (b) identifying a thematic framework, (c) indexing, (d) charting, and (e) mapping and interpretation.

Familiarization

Ritchie and Spencer (2002) assert that, in the initial phase, the researcher aims to obtain a comprehensive understanding of the gathered material by immersing themselves in the data. In this particular study, the data examined in this stage comprised 13 interview transcripts and field notes from observations, providing a holistic perspective on the breadth of emerging data. To initiate the process of familiarization, the researcher initially listened to all 13 recorded data sets, ensuring the accuracy of the transcriptions and enhancing individual observational field notes pages with additional details. Subsequently, the researcher listened to all the interviews for a second time, during which the researcher documented individual points of interest from each interviewee.

This practice of adding supplementary information upon re-listening to interviews aligns with the qualitative analysis methodology employed in the research conducted by Green et al. (2007) and is consistent with the interview data analysis process outlined by Halcomb and Davidson (2006). A total of 262 individual statements capturing impressions from the data were recorded, encompassing aspects such as the leadership role played by the teacher educator in the community and the sharing of gathered information.

The researcher then categorized these impressions into groups based on roles, including retired teacher educators (3 interviews), principals (2 interviews), teacher educators with more than five years of experience (6 interviews), and teacher educators new to the program with less than five years of experience (2 interviews). To facilitate analysis, all interviews were transcribed into a matrix format, with rows representing each question and columns representing each interviewee.

Identifying a Thematic Framework

According to the work of Ritchie and Spencer in 2002, following the familiarization stage with the research material, the analyst revisits the research notes to identify significant issues, concepts, and themes evident in the data. A thematic framework is established to categorize the material, assigning utterances in transcripts and key themes in observations and documents to initiate the synthesis of data. During this phase, the researcher returns to the initial 262 impression statements derived from the interviews conducted in the data familiarization stage.

They analyze key ideas from recorded documents and observations and proceed to synthesize individual notes and ideas into similar groupings, resulting in 68 categories. These categories align with the four groups of interviewees as previously outlined (e.g., methods of information sharing). Through a comparative analysis across all data, 25 overarching categories emerge, providing a focused index for the data. The reduction from 68 to 25 categories is a consequence of identifying repeated categories in the data from the five groups, which are consolidated into larger groupings.

Indexing and Charting

The process involves two key stages: indexing and charting, facilitating the encoding and application of data to a thematic framework. Initially, indexing entails labelling utterances and ideas for categorization, while charting involves organizing the indexed content into relevant categories. Each data source is assigned a letter or number in the margin, indicating its alignment within the overall framework. Once coded, the labelled utterances are attached to the thematic framework with corresponding categories or themes. In some cases, utterances may be coded into multiple categories. This coding process is applied to both interview transcripts and observational field notes. According to Ritchie and Spencer (2002), original categories may merge into similar themes, ensuring data linkage for future analysis.

After sorting data into overarching categories, a subsequent layer of indexing establishes sub-categories. New categories may be created if the data doesn't fit into predetermined areas (Ritchie & Spencer, 2002). During analysis, two additional categories emerged, leading to the development of sub-categories. Some utterances didn't directly align with initial categories, while others required reduction due to substantial content. A new category focused on the significance of principals in leading change, while another related to professional development and system stability merged into a new category. These additions revealed leadership and implementation aspects across respondent groups. Subsequently, sub-categories were developed to elaborate on emerging themes, requiring a thorough review of the data set for proper coding within the framework.

Mapping and Interpretation

At this juncture, in accordance with Ritchie and Spencer's (2002) guidelines, the analyst thoroughly examines the charts and research notes. They compare and contrast perceptions, accounts, or experiences while actively searching for patterns, connections, and internal explanations within the data. By systematically encoding and organizing the data into themes and categories, a more in-depth analysis follows. The files corresponding to each theme undergo multiple readings to discern comparisons, as well as to identify both similarities and differences. During this final phase of analysis, a comprehensive review of the data coded into synthesized categories

reveals opportunities for consolidation. Some categories can be amalgamated into broader themes, and in certain instances, they evolve into sub-themes within an overarching theme. For instance, categories such as Collective Inquiry, Learning and Application, and Continuous Improvement fall under the umbrella of Action Orientation and Experimentation.

FINDINGS AND ANALYSIS

The examination of the results was conducted from diverse angles to address the research queries and highlight the themes that emerged from the data. All participants responded affirmatively to the posed questions. The number and categorization of interviewees are detailed in Table 1. The responses to the semi-structured interview questions are presented below, categorized according to the specific research questions they addressed.

Table 1: The number and categorization of respondents

Strata	Number of respondents
Retired teacher educators	3
Principals of teacher education institutions	2
Experienced teacher educators (more than 5 years)	6
New teacher educators (less than 5 years)	2

Goals and objectives of professional organizations

The initial focus of our primary research aimed to investigate “What are the goals and objectives of professional organizations in teacher education?” To delve into this, four specific sub-questions were crafted for interviews, and the outcomes are summarized in Table 2. The first sub-question sought to understand the perspective on professional development among teacher educators, asking, “How do you define the professional development of teacher educators?”

The findings revealed that 38.4% of teacher educators perceive professional development as integral to their comprehensive personal and professional advancement. When combined with other responses, such as assistance in enhancing leadership qualities (23%), refining teaching skills (15.3%), collaborating with peers (7.6%), and nurturing scholarly competencies (15.3%), these collectively formulate the primary objectives of a professional community.

The second sub-question explored, “What are the personal goals and objectives of being a teacher educator?” The results show diverse responses, although common philosophies on teaching exist.

Examples include contributing to the entire education system (15.3%), societal status (15.3%), income purposes (7.65%), personality development (23%), advancement in leadership (23%), and gaining respect and affection from students (15.3%). Majority of the respondents expressed multiple goals or objectives despite prioritizing their roles as teacher educators.

The third sub-question inquired, “What conditions do you believe are necessary for individuals to learn to teach teacher students?” Results indicate that teacher educators should be innovative in teaching (46.1%), possess knowledge about recent developments in subjects and teaching (30.1%), have insightful ideas on student development (7.6%), and may be research-oriented (15.3%) beyond their basic education qualifications as teacher educators. The fourth sub-question in this section

seeks to explore the requirements or difficulties encountered by those involved in educating teachers: “What do you find the most challenging or core dilemmas of working as a teacher educator?”

The results focus on areas where professional organizations can assist teacher educators in addressing the encountered problems.

Table 2: Goals and Objectives of professional organizations (Sub-questions)

Q. No	Sub questions	Responses	Number of responses	%
1	How do you define professional development of a teacher educator?	Overall development	5	38.4
		Leadership improvement	3	23
		Improving teaching skills	2	15.3
		Cultivating scholarly skills	1	7.6
		Collaboration qualities	2	15.3
2	What are the personal goals and objectives in being a teacher educator?	Contribute to whole education system	2	15.3
		Reputation in the society	2	15.3
		Income purpose	1	7.6
		Personality development	3	23
		Advancement in leadership	3	23
		Love and respect from students	2	15.3
3	What conditions do you think are necessary for people to learn to teach teacher students?	Innovative in teaching	6	46.1
		Knowledge about recent developments in subjects and teaching	4	30.7
		New ideas for student development	1	7.6
		Research oriented	2	15.3
4	What do you find the hardest challenge or core dilemmas of working as a teacher educator?	Managing individual difference of learners.	4	13.7
		Time management for teaching and other related activities.	5	38.4
		Participation in research-oriented activities.	4	13.7

Process for the functioning of professional organizations

The second primary question posed was: “What methods do professional organizations employ to achieve their goals and objectives?” This inquiry was further broken down into five sub-questions, and the findings are presented in Table 3.

The corresponding four sub-questions are as follows: “To what extent do you perceive yourself as a member of a community of teacher educators?” “How frequently do you engage with other members outside of scheduled meetings on a monthly basis, and through what means?” “Have you gained insights from fellow teachers, and if so, what have you learned and how did you acquire this knowledge?” “What is your involvement in organizations of colleagues, and what aspects contribute to the sense of community in your experience?” Additionally, participants were asked, “Is there anything you would like to see this community undertake to foster a greater sense of community, relationships, or shared learning among teacher educators?”

Following a comprehensive analysis, five overarching themes and 20 sub-themes were identified.

Table 3: Process for the functioning of professional organizations

Theme	Subthemes
Shared mission, vision, values and goals	Developing a vision, mission, values and goal Finding steps to be followed to achieve vision, mission, values and goals. Challenges for achieving this vision, mission, values and goals. Solutions to these challenges.
Supportive and shared leadership	The leadership must be embedded to many and not in the hands of a few. Attention to leadership succession. Distributed leadership throughout the institution's community. Prepare Leadership skills and aptitudes for the future.
Collaborative teams based on shared personal practise	Team preparation. Establish goals. Prioritise and assign task. Decide on sequence and timetable of task. Evaluating team progress.
Action orientation and experimentation	Identifying and listing important data and information required. Collecting data and information. Disaggregate and analyse data. Sharing of data. Determine how to use data for improvement.
Community engagement	Understanding, responding to, and influencing the larger political, social, economic, legal, and cultural context. Collaboration with families and community members, responding to diverse community interests and needs, and mobilizing community resources

Five recurring ideas remained consistent across all participants during the interviews. Two teacher educators with over five years of experience and two principals were involved in monitoring the teacher educator landscape. The crucial first step for the algorithm for professional organizations of teacher educators was identified as having a “common mission, vision, values, and goals.” To achieve this, participants emphasized the importance of working with a shared commitment, supported by the testimony of a third teacher educator who experienced a “wonderful belongingness” in a professional community working toward a common cause.

The subsequent theme emerging from the second set of sub-questions revolves around supportive and shared leadership. One of the retired teacher educators thinks that I’m helping my new friends “to raise their goals, and I’m happy in sharing my experience in teaching and research”. One of the principals said, even though we find difficulties or challenges for framing solutions for snags we can solve them with supportive and shared responsibilities.

One of them who needed additional guidance in the realm of teaching teacher educators, despite limited experience, has inquiries for a group of seasoned teacher educators. They wish to understand the perspectives of experienced educators on what qualities make a good teacher educator and the expectations associated with this role.

The teacher educators (more than 5 years’ experience) explains the importance of leadership development of teacher educators by the professional organizations, the leadership should be in a distributed manner so that everyone will get a chance to develop their leadership abilities, be selected based on existing capabilities but it should be given all those who are ready to learn and change.

This gives the idea that the organizations can prepare the leadership skills and aptitude for future teacher educators by the training. One of the participants (principal) said that leaders should also be good followers then only he can grow the community or group from the existing state where he is specific.

The leader should be able to study the existing situation of a group and strategies, followed by the earlier leaders, finding persons responsible for each task or goal is good for distributed leadership, and it also points out the characters of a sustainable leadership which is important to teacher leadership positions.

The third sub-theme in this section is indicated by the response of one of the new teacher educators, (participant 13) “working as a team is great”. This section explains the segregation of goals into specific objectives and working together by assigning different tasks and practice evaluating the task. One of the participants who is an experienced teacher educator also talked about the goals, - “their role in the community is determined by the goals of the group” and retired teachers also suggested ways to allocate tasks by brainstorming, template making, etc.

Some teacher educators want to ask the other teacher educators and principals how they do their work. When they have made it as a course for teacher educator, out of thirteen four of them give an opinion that for achieving the common goals, they have to be action oriented. From all these ideas we considered that the tasks to achieve these goals can be accomplished by finding the challenges and solutions for achieving a goal, and for these we need information on the existing situation.

One of the retired teacher educators remarked “we possibly will follow identifying and listing of important information or data required”, collecting of data and information and then breaking down these information and ideas and analyzing the data required for every action by differentiating it.

The data must be shared with all the members of the community. Determining how these can be used for employment, the collaboration of teacher educators based on personal practice leads to the next section. The subsequent theme emphasized the importance of applying the mentioned practices for community benefit. One of the participants (principal) points out “community development is the responsibility of a teacher educator which can be shared in many ways.”

This denoted that teacher educators should constructively contribute to society by “collaborating with other organizations” as commented by one of the new teacher educators. This needs all the steps such as extracting information on the needs and interests of the community, analysing information for mobilizing the resources, and playing the role of a leader to consolidate all these activities.

Table 4: Professional organizations and quality of teacher education (Sub-questions)

Q. No	Sub questions	Responses	Number of responses	%
1	In a few sentences, explain how this professional community is currently supporting your work. What does not already do well in supporting you? How could community better support your work?	Very supportive	5	38.4
		More support required for collaborative activities	6	46.1
		More support required for research activities	2	15.3
2	Do you have any suggestions regarding how lines of communication can be made better?	Regularity of meetings	5	38.4
		Task oriented communication	1	7.6
		Importance to individual needs.	1	7.6
		Collaboration with more diverse groups.	1	7.6
3	What do you think of teacher educator meetings? What do you now get from them and what do you contribute? Do you have any suggestions regarding them?	Sharing of experience	8	61.5
		Information on recent developments in field	1	7.6
		Opportunities for paper presentations and seminars	1	7.6
		Communication with international and regional resource persons	3	23
4	Is there anything else do you think this professional community should know about your experience of working as a teacher educator, your needs, or the nature of teaching as a teacher educator in your institution?	Already shared experience	11	84.6
		Need more experience sharing	2	15.3

The third research question explored: “how achievement of the professional organizations goals helps teacher educators to work in their educational context?”. This inquiry comprised four sub-questions, and the outcomes are delineated in Table 4. The first sub-question asked: “In a few sentences, explain how this professional community is currently supporting your work. What does not already do well in supporting you? How could community better support your work?” Results reveal that more actions should be taken to support teacher educators in different areas and the practicing of specific procedures for different areas is beneficial. 46.1 % of the teacher educators’ comments that interestingly, it is important to get support from professional organizations on conducting collaborative activities in the teacher education institutions The second sub-question in this section queried: “Do you have any suggestions regarding how lines of communication can be made better?” The results indicate that offline and online modes of communication are used and many of them suggested improved regularity of communication. 38.4 % of the teacher educator think that regularity of communication will improve the working of professional organizations.

Sub question three in this section was “What do you think of teacher educator meetings? What do you now get from them and what do you contribute? Do you have any suggestions regarding them?” The results indicate that the experience of each one and the communication about these experiences (61.5%) will improve the

performance of all. Teacher educators also consider that the discussion with others on the same field help them to get news on recent developments in their concerned area. The fourth sub-question checked the respondents reply on “Is there anything else do you think this professional community should know about your experience of working as a teacher educator, your needs, or the nature of teaching as a teacher educator in your institution?”. 84.6% of them think that they have already shared their experiences in the community even though not to all.

DISCUSSION

The results of this research indicate that teacher educator professional organizations, with defined goals and objectives, can play a crucial role in advancing both the personal and professional growth of educators. Employing a systematic and pre-structured approach can aid in fostering the multifaceted qualities of teacher educators, including their roles as teachers, scholars, leaders, learners, and collaborators (Klecka, Donovan, Venditti, & Shoot, 2008). Fostering these professional identities among teacher educators is crucial for enhancing the overall excellence of their efforts within their specific environments. However, it is noted that, in general, teacher educators’ associations are not actively involved in fostering the development of these professional qualities, with only a few nations exhibiting such engagement (Snoek, Swennen, & Klink, 2011).

The study posits that nations where professional organizations are structured as associations (Snoek, Swennen, & Klink, 2011) may have formulated plans that support the professional qualities of teacher educators. Implementing action-oriented algorithms within professional organizations can play a pivotal role in advancing the professionalism of teacher educators. The comprehensive growth of teacher educators, facilitated by a well-organized professional community, holds the potential to exert influence on education policymaking. These organizations possess the capability to formulate a cohesive operational guide aimed at elevating the capabilities of teacher educators, thereby fostering a higher quality professional environment. Nevertheless, it is crucial to acknowledge certain limitations inherent in this research, including constraints imposed by the chosen research design and data analysis methods. The study specifically concentrated on a particular teacher education community, suggesting an opportunity for expansion to encompass various associations dedicated to the ongoing professional development of teacher education. Moreover, future research endeavours could delve into examining how professional organizations impact policymaking and explore the ways in which such initiatives contribute to the diverse identities of teacher educators.

CONCLUSION

In the endeavour to empower teacher educators and equip them with the requisite practices for their pivotal roles, this paper posits the formulation of an algorithm tailored for professional organizations of teacher educators. It advocates a quintet of essential steps aimed at optimizing the efficacy of these organizations. Drawing upon empirical data, the study underscores the procedural significance of professional organizations and their pertinence in enhancing the endeavours of teacher educators within their specific contexts.

The identified key components for effective functioning are delineated as follows: a collective commitment to a shared mission, vision, values, and goals; the cultivation of a supportive and collaborative leadership ethos; the formation of collaborative teams grounded in shared personal practices; a proclivity towards action-oriented initiatives and experimentation; and active engagement with the community. The empirical findings of the study not only underscore the importance of adhering to these procedural elements but also illuminate the relevance of such pursuits in elevating the professional attributes of teacher educators within their respective educational institutions. The study data accentuate how active participation in these professional organizations contributes to the amelioration of the teaching faculty's capabilities, thereby enhancing the overall quality of education delivery.

Underpinning the call for fortifying professional organizations of teacher educators are various theoretical frameworks, empirical insights, and research findings culled from diverse realms within the expansive domain of teacher education and learning. The establishment of a robust professional community is posited as instrumental in facilitating the seamless integration of newcomers by ensuring the timely dissemination of pertinent logistical information.

A meticulously structured professional community, guided by predetermined goals and objectives, is asserted to yield more definite outcomes, thereby nurturing problem-solving skills as an inherent aspect of the collaborative process. Furthermore, professional organizations are posited as formidable pillars of support for teacher education programs, affording teacher students comprehensive guidance and mentorship. As a result, this contributes to enhancing the overall quality of teacher preparation programs, placing significant emphasis on the comprehensive growth of teacher educators.

The global purview of professional organizations emerges as a catalyst, enabling teacher educators to transcend local confines and enrich their experiences on an international scale, thereby contributing to the enhancement of regional educational quality. In essence, the strategic strengthening of professional organizations emerges as an imperative, wielding transformative potential across the spectrum of teacher education and fostering a collective commitment to excellence.

Author Declaration Form

Here by the authors declare that the work titled 'An Algorithm for Enhancing Professional Development and Quality Assurance in Teacher Education' is an original work, and it has not been published in any form prior to submitting with Community Practitioner Journal and the work has not been submitted elsewhere concurrently. The authors don't have any conflicts of interest and the corresponding author has the permission of co-author for submitting the work with Community Practitioner Journal.

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Appendix 1

Interview questions

- 1) How do you define professional development of teacher educators?
- 2) What are the personal goals and objectives in being a teacher educator?
- 3) What conditions do you think are necessary for people to learn to teach teacher students?
- 4) What do you find the hardest challenge or core dilemmas of working as a teacher educator?
- 5) To what extent do you experience yourself as being part of a community of teacher educators?
- 6) In a month, how often do you communicate with other members outside of meetings? How do you communicate?
- 7) Have you learned from fellow teachers? If so, what have you learned? How did you learn?”,
- 8) What is your experience on organizations of colleagues? What made things an experience of community?
- 9) Is there anything you would like to see this community do to build more spirit of community, relationships, or shared learning among teacher educators?”
- 10) In a few sentences, explain how this professional community is currently supporting your work. What does not already do well in supporting you? How could community better support your work?
- 11) Do you have any suggestions regarding how lines of communication can be made better?
- 12) What do you think of teacher educator meetings? What do you now get from them and what do you contribute? Do you have any suggestions regarding them?
- 13) Is there anything else do you think this professional community should know about your experience of working as a teacher educator, your needs, or the nature of teaching as a teacher educator in your institution?