

 Research Article

Teacher Leadership Development: The Role of Professional Certification Programs

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Abstract

The past few decades have seen a growing interest in teacher leadership development worldwide. However, there is a need for more empirical research to understand how professional certification programs make teachers leaders, what roles teacher leaders play and what challenges they encounter. This study addresses these questions by examining the perceptions of eight professionally certified teachers working at a Government College in Bangladesh. As a qualitative study, participants were selected through purposive and snowball sampling, and a self-developed semi-structured interview schedule was used to collect the data. Data were then analyzed thematically. The findings reveal that professional certification programs significantly contribute to making teachers as leaders, enhancing their pedagogical, professional, research, and collaborative skills compared to their prior positions. In addition, these professionally certified teacher leaders motivate students for better careers and organize seminars, symposiums, and workshops to improve their achievement, inspire colleagues to pursue higher degrees, exchange innovative teaching approaches with them for their professional development, and work on academic committees and research cells, provide valuable insights for overall college improvement. However, the study found that professionally certified teachers face challenges such as a top-down leadership approach, a lack of collaborative college culture, external political pressure, limited financial incentives for pursuing degrees, and a lack of desirable postings to complete the professional certification programs. In contrast to previous literature, the study did not find a lack of time among the professionally certified teachers to perform leadership roles. This study sheds new light on developing teacher leadership through professional certification programs and providing insights for principals and policymakers on how certified teachers contribute to overall college improvement. Future research should focus on the impact of teacher professional certifications on student achievement, colleagues' professional development, and overall college improvement from students', colleagues' and principals' perspectives.

Keywords: Collaboration, Professional Certification Programs, Professional Development, Teacher Leadership



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1. INTRODUCTION

Over the past few decades, the concept of teacher leadership has gained considerable attention from practitioners, researchers, and other stakeholders worldwide (Muijs & Harris, 2007; Wenner & Campbell, 2017; York-Barr & Duke, 2004). Teacher leadership refers to informal and formal leadership roles inside and outside the classroom. As informal teacher leaders, they deliver lectures, manage students, perform duties as invigilators, and inspire and motivate students inside the classroom. Besides, as formal leaders, they work in different committees, set objectives for the department, develop curriculum, motivate novice teachers, and participate in various training programs outside of the classroom (York-Barr & Duke, 2004; Ghamrawi et al., 2023). These dual roles signify the potential of teacher leaders to enhance educational improvement. However, teachers require support through professional certification programs, which are specialized training courses that equip teachers with the necessary leadership skills, to bridge the gap

between their inherent abilities and the leadership skills required for educational improvement (Tjabolo, 2020).

Teacher leaders are significant for the growth of education. As leaders, they play a big role in improving educational institutions and are the main force behind educational changes (Ghamrawi, 2023). These leaders also help the institutions by changing policies, developing curricula, improving teaching and learning, and helping principals (Campbell et al., 2019). Leadership skills also help teachers feel more confident and develop their self-efficacy. Self-efficacy helps teachers motivate and guide their students, which in turn helps students learn (Katzenmeyer & Moller, 2009; Warren, 2021; Shen et al., 2020). Although teacher-leaders are significant in changing curricula and helping students learn, how well they perform their roles depends on their leadership skills (Kilag, 2023). However, most teachers lack these essential leadership skills when they come into the teaching profession.

As many teachers do not have the necessary leadership skills when they first start working in educational institutions, there is a strong case for extra care, specialized training, and advanced degrees to help them develop these skills (Muijs et al., 2013). Developing teacher leadership skills requires specific knowledge and abilities, such as knowing much about curriculum, pedagogy, research, and how to coach and mentor students and colleagues. Understanding cultural dynamics, organizing resources, and encouraging professional teamwork are also essential for teachers in leadership positions (Sato et al., 2014). Recognizing these benefits and roles of teacher leadership underscores the need for specialized leadership programs that equip teachers with the necessary leadership skills.

Recent studies discovered that specific teacher leadership programs contribute to developing teachers' leadership skills and capacities at educational institutions. For instance, Fernandez-Chung et al. (2024) found that Bangladeshi college teachers who participated in the Continuous Professional Development training project developed their capacities to ensure quality assurance activities than non-participants. However, they also found that these teachers lacked leadership support to practice their roles. Ungarean et al. (2023) found that a Master's in Educational Leadership program at a Florida university equips teacher leaders with practical experience in 12 schools, with support from a school-based mentor and university lecturer throughout the program. During each master's degree, teacher leaders are prepared to become future leaders by completing internship tasks. Besides, several studies have investigated the role of the National Board Certification Program (NBCP) in preparing teachers to be leaders in the USA. These studies discovered that NBCP helps develop school teachers as leaders beyond their classrooms, and they perform their responsibilities and roles (Bunch, 2012; Cannard, 2018; Sato et al., 2014; Swan Dagen et al., 2017; Shirrell & Saha, 2024). Another exploratory study found that master's program teachers are leaders in school and university settings and that teachers' teaching activities in discharging leadership responsibilities promote school development (Snoek et al., 2017). However, most existing studies focus on specific leadership or certification programs, leaving a gap in understanding how professional certification programs prepare teacher leaders for college settings.

This study aimed to explore the role of professional certification programs in preparing teacher leaders for college education. Moreover, this study also explored the leadership roles that professional certified teachers perform and the challenges they encounter in performing these roles. This study contributes to the existing literature by documenting the role of professional certification programs in making teachers leaders in college settings. It also discovered the leadership roles that certified teachers perform to improve college education and the barriers they encounter in performing these roles. This study sheds light on developing teacher leadership through professional certification programs, motivating teachers to pursue professional degrees, and helping policymakers ensure a collegiate environment where teachers can perform leadership roles.

1.1. Literature Review

1.1.1. Teacher Leadership and The Professional Certification Programs

Upon reviewing the burgeoning literature, it is evident that there is no agreed-upon definition for teacher leadership. The most acceptable definition given by York-Barr and Duke (2004) is that teacher leadership refers to how teachers at their institutions motivate colleagues and instructional leaders to enhance their pedagogical and leadership abilities. Teacher leaders inspire their colleagues to improve their

teaching-learning activities, persuade them to pursue higher education, provide direction to novice teachers, and cooperate with and influence department heads and principals to improve student attainment and overall development of educational institutions. In addition, teacher leaders work on teaching learning activities inside the classroom, developing pedagogical knowledge and classroom management capacities.

However, a professional certification programme is a process in which a person must meet a set of requirements or standards based on the expected level of performance in that profession. (Adams et al., 2004). In addition, teachers must have a bachelor's degree to participate in this programme and pass the overall certification process, which may result in a better potential teacher (Kusumawardhani, 2017). Ucar (2012) argued that these programs could increase teachers' potential and mould their attitudes and views. A recognised professional certification can demonstrate credible evidence of the expertise and knowledge of teachers in the field of their professional activity, just as a degree from an accredited institution can (Adams et al., 2004).

Over the past few decades, many studies have investigated teacher certification programs and teachers' self-efficacy, quality, and leadership. However, many of these studies have focused on specific teacher certification programs and their roles in enhancing schools' teacher quality and formal and informal leadership capabilities. For instance, Sato et al. (2014), in their exploratory study, reported that the National Board Certification program had an impact on teachers' leadership in school in three ways: a) the scope of their leadership, b) the choices they had for leading their functions and responsibilities, and c) the strategies they used to ensure their engagement in those functions and responsibilities. According to this study, the significance of this finding lies in both the formal and informal leadership roles performed by teachers. These findings, in terms of informal leadership roles, were partly confirmed by Muijs et al. (2013), and Gao et al. (2010), who found that alternatively certified teachers were eager and able to take on informal leadership tasks and positions, including taking the initiative in school. Regarding formal leadership roles, Cannard (2017) discovered that nationally board-certified teachers were quickly able to engage with other organisations, lawmakers, and colleagues because it promoted teachers to be leaders outside the classroom and improved school learning. Furthermore, past studies have found that certification programs enhance teachers' confidence, develop new skills, and become most relevant to their teaching-learning activities (Connelly & Place, 2008; Hakel et al., 2008; Coskie & McMahon, 2007).

However, most studies in the United States (Angrist & Guryan, 2008; Goldhaber & Brewer, 2000; Kane et al., 2008; Sharkey & Goldhaber, 2008) have not discovered a strong and meaningful impact of certification on teachers' quality and roles. Similarly, Kusumawardhani (2017) discovered that having certified teachers does not benefit students and that there is no conclusive evidence that certification affects teacher outcomes in the Indonesian environment. In a recent empirical study, Xu et al. (2024) found no difference between the impact of traditionally and alternatively certified teachers on curriculum leadership development. Therefore, whether certification programs can create teacher leaders is debatable. Hence, further studies are required to develop a deeper understanding of this issue.

1.1.2 Teacher Leaders Roles

It is evident that teacher leaders not only work inside the classroom but also engage themselves outside the classroom. For example, Katzenmeyer and Moller (2009) stated that teacher leadership roles fall into three categories: first, as leaders of students or other educators: facilitators, teachers, mentors, trainers, syllabi experts, developing new methods, and directing learning groups. Second, along with acting as a department head, action researcher, and member of several committees, the leadership of optional activities includes keeping the educational institution structured and directing it toward its goals. Third, decision-making leadership: participation in school teams, higher education institutions, committees, and educational associations. In support of this assertion, Bond (2022) stated that teacher leaders can serve in a variety of formal and informal leadership capacities in educational institutions, including those of department heads, association delegates, guide teachers, mentor teachers, and members of the teacher's council. These roles are connected to formal leadership. Teachers also play informal leadership roles in their educational institutions by imparting knowledge, planning novel activities, conceiving innovative plans, encouraging colleagues to fulfil their responsibilities in the classroom, and assisting fellow teachers in improving teaching methods.

In an empirical study in a school context, Swan Dagen et al. (2017) found that 39% of teachers saw their responsibilities as formal, while 47% saw their leadership as informal. When asked how they developed their leadership skills, 44% claimed formal training such as advanced degrees, credits, or certification, and 41% reported obtaining these talents or attributes through experience and mentoring. However, few studies have been found in the literature that are quantitative, obsolete, and focus on specific teacher certification programs at school levels. Therefore, more explorative research is required to understand the leadership roles that certified teachers perform in college settings.

2.3 Barriers to Developing Teacher Leadership

Although developing teacher leadership in educational institutions has become paramount worldwide to accentuate teacher quality and quality education, teachers experience time shortages and resistance from colleagues to perform leadership roles. For instance, Gumede (2011) found that in a semi-urban setting, teachers needed more time, whereas in a rural setting, teachers of a primary school in South Africa needed more support from the school management team. Likewise, Thornton (2010) discovered that lack of time was frequently a barrier to developing teacher leadership because many expectations prevented teachers from devoting the time required to serve as leaders, such as individual and team planning, serving the needs of the complete child, collaborating with parents and other experts, completing paperwork and other administrative chores, committee participation, and satisfying new accountability and testing standards were among the expectations. Those who wanted to be more involved in driving change in their schools and districts felt that they could not add another item to their already overburdened plates and needed more time to collaborate with and lead other teachers. However, Loeb et al. (2010) discovered that national board-certified teachers participate in various leadership activities, and that many of them report getting a lot of support and recognition from others. This finding is important because teacher leaders' ability to gain respect and trust in their peers is a crucial component of their achievements (York-Barr & Duke, 2004). More than 87% of teachers in Washington said that their immediate co-teachers and supervisors supported their positions as building leaders (Loeb et al., 2006). In contrast, when examining the broader culture of the school, Koppich et al. (2006) found that national board-certified teachers reported facing strong resistance from their colleagues in pursuing even minor leadership roles. Therefore, the literature contains confounding findings regarding colleagues' support for flourishing leadership roles.

Teachers and educational institutions are dominated by traditional organizational or structural constraints that imply a top-down leadership paradigm (Katzenmeyer & Moller, 2009; Salahuddin, 2012). In an empirical study, Hossain et al. (2023) found that the traditional hierarchy in educational institutions impedes educator leadership since superiors want to maintain authority and institute directors are hesitant to be educators' leaders. According to empirical studies in the school context, the top-down leadership model and traditional school structures present several barriers for teachers to achieve autonomy and exercise leadership responsibilities in educational institutions (Hunzicker, 2017; Wenner & Campbell, 2017). The extant literature shows that teachers in a school context face a top-down hierarchical approach while exercising leadership activities. However, research is yet to be conducted in a college context to investigate this issue.

Moreover, Instructional leaders' biases in selecting teacher leaders or prioritising some teachers who are close to them may be another vital impediment to developing teachers as leaders. For instance, Murphy et al. (2009) discovered that a significant barrier to preparing teachers to be leaders is favouritism and nepotism among school instructional leaders when selecting teachers and teacher leaders. Furthermore, they concluded that adopting leadership methods is stifled when principals exhibit a bias in the choice of teacher leaders. Therefore, although several studies have focused on obstacles to schoolteacher leadership, more research is needed on the barriers that professionally certified college teachers face when performing leadership activities.

In summary, although some studies have focused on specific teacher certification programs and teacher leadership, teacher leadership roles and barriers, most of these studies are conducted in school contexts, and the findings are backdated, so more research is needed to understand the issues in college contexts. This study seeks to bridge a knowledge gap by investigating the following research questions: (1) What are the roles of professional certification programs in developing teacher leadership? (2) What leadership roles do professionally certified teachers perform in college contexts? (3) What barriers do professionally certified teachers experience in performing leadership roles?

2. METHODS

2.1 Research Design

This research paper was an explorative investigation in nature (Maxwell, 2014) because the purpose of this study was to provide an in-depth understanding of the role of professional certification programs in developing teacher leadership and leadership activities and challenges in a college setting, using a qualitative approach. This approach was chosen because it allows the researcher to comprehend human experience and attitudes in a natural setting and identify unique insights within the data to go deeper into the issue (Hastie & Hay, 2012; Hollstein, 2011). Data were obtained from eight professional certified college teachers who worked at a traditionally prestigious government college chosen by purposive and snowball sampling, using a semi-structured interview framework.

2.2 Setting and Participants

Brojomohun College is one of the largest Govt. colleges affiliated with the National University of Bangladesh were chosen for this study because approximately 200 teachers are employed in 22 subjects, ranging from lecturers to professors. Over 20 teachers hold professional certification degrees, along with their undergraduate and graduate degrees. Purposive and snowball sampling were used to choose the eight professional certified teachers participating in this study. The purposive sampling technique was utilised because it does not require underlying theories or a fixed number of participants, and the researcher selects what needs to be known and sets out to find people who can and are willing to offer information through expertise or experience. It helps identify and select information-rich situations to use available resources (Acharya et al., 2013; Etikan, 2016). According to Martínez-Mesa et al. (2016), snowball sampling helps researchers select potential participants who have similar characteristics with the help of the initially selected participants. All selected participants completed professional certification programs, such as the Ph.D., B.Ed., Foreign Master, and M Phil listed in Table 1. To maintain anonymity, the names of the teachers were coded as T1 to T8.

Table 1. Coding of the Participants

Teachers	Designation	Sex	Certification Programs
T1	Associate Professor	Male	Ph.D.
T2	Associate Professor	Female	Ph.D.
T3	Assistant Professor	Male	MA in Education, Ph.D.
T4	Assistant Professor	Male	Ph.D.
T5	Lecturer	Male	MA in Education
T6	Lecturer	Female	M Phil
T7	Lecturer	Female	Ph.D.
T8	Lecturer	Female	B.Ed, MA in Education

2.3 Data Collection Instrument

Three predetermined main questions and a few sub-questions with some follow-up questions (Creswell, 2007) under each main question comprised the semi-structured interview guide (Wahyuni, 2012) used to collect the data. For example, what roles do you perform to enhance student achievement? The theme is student achievement. How does your professional certification program benefit you in developing your collaborative skills? The theme is collaborative skills. However, the respondent's right to an open discussion was preserved in case of any ambiguities, gathering more in-depth information (DiCicco-Bloom & Crabtree, 2006; Wahyuni, 2012). A semi-structured interview schedule was employed because it is well suited to explore the participants' experiences and perceptions, gather more information for clarification, and mitigate the limitations and shortcomings of both structured and unstructured interview guides (Opdenakker, 2006). The themes and sub-themes (Alhojailan & Ibrahim, 2012) that emerged from the existing literature served as the foundation for all the research questions. A pilot test was implemented with two professionally certified teachers who had the same qualifications as participants to identify the flaws or limitations in the interview design. However, the study did not include it (Turner, 2010). Data were gathered through in-person interviews from January 1–8, 2022.

2.4 Data Collection Procedure and Ethical Issue

There were two phases to the participant selection. In the first phase, ten professionally certified teachers were given emails that contained a general information page. Five teachers voluntarily participated in the study, but the other certified teachers were reluctant to do so because they were busy with other tasks. After following the snowball sampling technique, an information document was emailed to ten certified teachers later in the second phase, and three of them voluntarily agreed to participate. Before gathering data from the participants, it was also communicated to them by email what the research's aims and objectives were so that they would understand why the study was being conducted. Data were gathered from participants in an appropriate room to prevent gathering in noisy surroundings (Turner, 2010).

Additionally, quick notes were made in a diary throughout the interview to make it simple to extract themes from the data. With the participants' permission, a digital camera and an audio recorder were also utilized to capture and record the interview. Confidentiality and anonymity were maintained strictly in terms of preserving and presenting data to keep up the ethical issues of the participants (Orb et al., 2001). Besides, all the participants enjoyed the freedom to withdraw their names from the interview until the completion of data analysis (Orb et al., 2001).

2.5 Data Analysis Techniques

A thematic analysis approach (Alhojailan & Ibrahim, 2012) was used to evaluate the data because this form of analysis is highly inductive, and data collection and analysis happen simultaneously. This analysis process allows researchers to examine the interview data by isolating themes from the gathered data and coding those (Denzin & Lincoln, 2018). The raw data were processed using Braun and Clarke's (2006) six-phase framework approach to identify themes. Step 1: Familiarize with the facts; create initial coding in step two; finding topics is step three. Step 4: Examine the themes; define themes in Step 5, and write a report in Step 6. The application of this model assisted in illuminating the respondent's perspectives and ideas regarding the role of professional certification programs in fostering teacher leadership in the college environment. The interview transcripts were read numerous times to familiarize with coding after data collection. The researcher concentrated on deleting superfluous data (Kothari, 2004) and deciding which should be included or excluded to answer the research questions while coding the data entails creating the first code stages (open code) (Wahyuni, 2012). Selective coding was used to turn the data into understandable word chunks, phrases, or single words (Wahyuni, 2012). A thematic mind map was then created sequentially to depict the findings, with the generated themes being checked often to ensure that no key patterns were left out. After writing a report, it was sent to a participant to check it out so that no exaggeration or unnecessary information may be included (Noble & Smith, 2015). A senior colleague, an expert in qualitative research, was engaged in helping of reducing biases, and the findings were interpreted and located in a broad literature, showing comparison and contrast to enhance the validity of the findings (Noble & Smith, 2015).

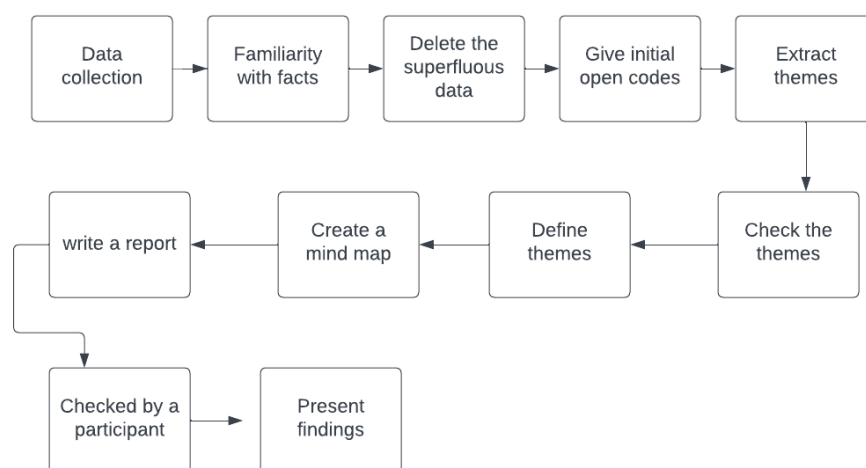


Figure 1. Framework for the Data Analysis Process

3. RESULTS

This study explored the roles of professional certification programs in making teachers leaders, their leadership roles, and the barriers they face in accomplishing leadership roles in college contexts. This section highlighted the significant themes from the participants' responses to address the research questions.

3.1 The Role of Professional Certification Programs in Developing Teacher Leadership

3.1.1 Pedagogical Skills

Interviewed certified teachers reported that professional certification programs improved their teaching practices because they had to collaborate with research fellows, learn innovative teaching approaches, and give presentations to teachers during the certification programs. Some also reported that preparing excellent lesson plans and taking demo classes accentuated their pedagogical skills.

Before the certification program, I was intimidated by teaching students and lacked knowledge of effective teaching strategies. I primarily used the lecture method. However, thanks to the program, I learned strategies such as icebreakers, group discussions, lesson planning, using multimedia in the classroom, and analyzing and trying to overcome prior mistakes. (T4)

I learned class management tactics, mentoring skills, and how to take a class efficiently using a student-centered teaching approach through a certification program [...]. I have also learned how to find the current study resources to gain a more in-depth understanding. (T8)

When compared to previous positions, certified teachers claimed that their pedagogical expertise had significantly increased because, before certification, they had no idea how to create successful lesson plans or take classes using cutting-edge technologies and modern teaching methods.

3.1.2 Professional Skills

The participants agreed that professional certification programs helped them develop self-confidence, time-management capacity, and adaptability. Most respondents stated that their understanding capability and critical thinking capacity were enhanced by participating in this program.

The certification program that I completed enhanced my self-confidence to take my class successfully, and I could easily understand any concepts. I can easily solve any difficulty, critically evaluate problems, and instantly understand concepts [...]. It also enhances my teamwork ability. Now I can work with colleagues and adapt to any situation. (T1)

Now I am very much aware of time management in every sector, but before completing the certification program, I was a little bit untidy [...]. I believe that this program makes me an extrovert, and I love to communicate with other people and try to maintain a good connection with them. I am now more reflective and insightful. (T5)

According to participants, professional certification programs assist teachers in developing self-confidence, reflection, critical thinking, and time management skills, enabling them to be more perceptive and innovative.

3.1.3 Research Skills

Six of the eight participants indicated researching to advance their professional knowledge, and they said that their certification programs inspired them to conduct research and publish articles.

Doing research is now my goal. I have already written four articles on various social problems and have continuously endeavoured to write. This certification program has increased my research skills and helped

me design research, collect data, and analyze it efficiently. I learned all of these from the program. I see any problems from an exploratory perspective, unlike how most people think about them. (T7)

My PhD motivated me to continue my research, and I have already written ten papers and a book on various subjects. I frequently wrote articles and essays on various subjects related to my expertise. (T3)

When asked about his plans, T8 said, "I am now seeking to pursue a PhD in public health as I completed the B.Ed. and MA in Education programs, which pushed me to pursue a higher degree."

3.1.4 Collaborative Skills

All participants stated that certification programs improved their ability to work collaboratively because they had to coordinate various programs, seminars, and presentations while collaborating with their peers, sharing their experiences and research materials, and working with their supervisors, co-supervisors, and other teachers.

I have become more outgoing and can work well with my co-teachers. Before the certification program, I would not have dared try anything new, but now I feel comfortable starting new projects in my department. My ability to engage in community work, and work with different committees have been enhanced. (T5)

I can arrange any program confidently and work with my colleagues. When I pursued my degree, I had to participate in different programs, such as seminars, symposiums, and cultural programs, and collaborate with my supervisors and other teachers, which enabled me to become a leader. (T1).

Certified teachers believe that these programs developed their capabilities to take classes efficiently by applying active learning strategies and developing professionalism. Besides, these programs enhanced their confidence to work with others, engage in community programs, and work on different committees.

3.2 Leadership Roles

3.2.1 Roles for Student Achievement

All participants stated that they encouraged students to read basic books (both academic and non-academic), the most recent research papers, English newspapers, and magazines to accentuate their knowledge to prepare for the future competitive job market while sharing certified teachers' practical experience. Some of them also stated that they insisted that department heads arrange seminars, symposiums, and other social and cultural events to assist students in developing their latent skills and thrive in their leadership responsibilities inside and beyond the classroom.

Of course, I encourage my students to pursue better jobs in the classroom, inform them of the many job choices available, teach them different answer-writing techniques to help them do well in examinations, and direct them to follow my advice. They received constant encouragement from me to study basic books and visit the library to read the English newspapers and periodicals I had gone through during the certification program. I also connect students to significant websites, such as www.scholar.google.com, where they can read the most recent research papers [..] (T3)

I am a student-friendly instructor More significantly, I organize group discussions and debates in my class and encourage them to speak up to improve their leadership skills. After each lesson, I used a formative assessment to examine my students' understanding capacity (T4).

A better future for their students is always in the minds of certified teachers. They encourage authorities to bolster seminar libraries with up-to-date books and journals, offer emotional support to

depressed students, and inspire students to pursue higher education. Along with teaching how students should think critically, improving their knowledge, and inculcating morality and ethics are the issues they regularly discuss in the classroom.

3.2.2 Roles to Colleagues' Professional Development

The participants claimed that they discussed new ideas that came to mind with their colleagues and provided advice on improving their teaching methods while encouraging them to pursue academic degrees.

[...] continually pushed my colleagues to write articles and earn a Ph.D. I also asked them to research and follow my teaching style in their classes. (T3)

I assisted my colleagues in developing their pedagogical skills by sharing my knowledge, ideas, and teaching approaches that I learned from my certification program. (T5)

Participants said that they encourage their colleagues to participate in research activities to increase their research knowledge, assist junior colleagues in resolving problems encountered in college, and share excellent teaching approaches with colleagues to improve their pedagogical expertise.

3.2.3 Roles to College Improvement

Four of the eight participants stated they participate in college improvement activities, such as working in various committees, providing views in meetings, and working in a publication cell. Five out of eight participants said that they set the objectives for their department and initiate new programs for the benefit of students.

Now, I serve on various committees and provide ideas for improving the academic sector. I work in the residence hall as a hall super, work in a research cell to publish the college journal and perform my role as a delegate to other organizations. I have a professional degree, assisting the principal in improving the institution. (T1)

I play a pivotal role in launching new programs for developing my students' skills by consulting my head. However, my principal does not allow me to provide my insights to improve teaching-learning activities. (T2)

Professionally certified teachers said that they serve on various academic committees and attend monthly meetings to provide suggestions and insights to department heads and principals on how to improve the teaching-learning environment in institutions.

3.3 Barriers to Developing Teacher Leadership

3.3.1 Structural Barriers

All the respondents demonstrated that decisions are made from the top down, and most rules and regulations are strict. Besides, they need a more collaborative culture among their colleagues to perform their leadership duties. They are sometimes put under external political pressure to take on leadership roles.

In my experience, I have seen decisions on significant issues about college progress made in an academic council meeting with the participation of the principal and vice principal, as well as the heads of various departments, and those decisions are then mandated for teachers to follow. (T3)

I think [...] the principal prioritizes teachers who have a political connection and remain close to him. Teachers are divided into factions due to their various political ideologies indirectly through political involvement is forbidden in practice. External political pressure also exists on our activities, and a lack of social bonding and teamwork among teachers is visible. (T2)

Interviewed teachers pointed out that the absence of a collaborative culture and the senior-junior relationship gap is acute in college education due to the different political ideologies of teachers. However, politics is strictly forbidden to practice as government officials. Additionally, college authority's biases in selecting teachers for money-making committees discourage certified teachers from engaging in leadership activities.

3.3.2 Professional Barriers

All participants asserted that they receive little or no compensation for finishing their certification programs and no recognition for their modern classroom techniques. Additionally, as most colleagues envy teacher leaders, they experience a decreased sense of connection while acting in leadership roles. They also expressed dissatisfaction with their positions due to the slow promotion rates, which depresses them and limits their ability to exercise leadership roles.

I receive two extra increments for pursuing a PhD but no rewards or praises for adopting a student-centred teaching approach in the classroom. Besides, when I take on new initiatives and run any programs, my colleagues get envious, and I feel less connected to them. However, I have enough time to practice my leadership roles. (T2)

[...] Sorry to say that I've been working as a lecturer for seven years, and I pursued my BEd degree ten years ago; however, I did not receive any financial benefit for it, and I don't know when I will be promoted to Assistant Professor. (T8)

No rewards or letters of acclamation certified teachers receive despite innovatively taking a class in a college setting, and most of the teachers must work in the same position for around ten to twelve years on average. However, it differs from subject to subject. This circumstance damages the potentiality of the certified teachers and deters them from engaging in leadership activities. When I asked certified teachers about their time, they said they have no time shortage to engage in leadership activities.

4. DISCUSSION

The themes that have emerged regarding the role of professional certification programs in developing teacher leadership are pedagogical, professional, research, and collaborative skills. Certified teachers demonstrated they had learned innovative teaching approaches and classroom management techniques they lacked before completing the programs. This result is in line with the findings of Hakel et al. (2008), who discovered that the National Board for Professional Teaching Standards (NBPTS) optional certification program trains teachers in cutting-edge teaching techniques while preparing them to be more insightful and reflective about teaching their classes. This finding contrasts with the situation in the United States, where the majority of studies (Goldhaber & Brewer, 2000; Angrist & Guryan, 2008; Sharkey & Goldhaber, 2008; Kane et al., 2008) did not find that certification has a significant and meaningful impact on teacher instructional quality. Similarly, Kusumawardhani (2017) highlighted no conclusive evidence that certification influences teacher outcomes in the Indonesian environment. In explanation, professionally certified teachers learned how to use a student-centered teaching approach instead of a teacher-centered approach, using various active learning strategies, such as preparing lesson plans and organizing group discussions, and they also learned how to manage a class well. There they had to take some demo courses and give many presentations in front of their colleagues and teachers, which increased their pedagogical knowledge. Most certified teachers believed they lacked these skills before completing these programs, despite having bachelor's and master's degrees.

Professionally certified teachers believed that certification programs had increased their professionalism and made them more reflective and insightful. A similar finding was made by Cookie & Place (2008), and Hakel et al. (2008) reported that certified teachers gain better insight into their teaching and learning approaches. Furthermore, this finding is consistent with the findings of Connelly & McMahon (2007), who found that certified teachers felt confident as they studied various new ideas and tactics to gain certification. It is important to note that certified teachers develop high confidence in teaching and believe

they can easily understand concepts since they have gone through rigorous learning processes and different situations to get professional degrees, enhancing their understanding and adaptability. In addition, not only can they quickly identify any problem, but they can also delve deeper into the topics and analyze them from different perspectives.

Professionally certified teachers developed research skills, continued to engage in research activities, and published articles after completing these programs. Through these programs, certified teachers developed an inquisitive mind and a burning desire to explore the unexplored, see the unseen, and experience the unknown. Some of them intended to pursue advanced degrees in the future. Collaboration with colleagues and delegates from other organizations is simple for certified teachers. Cannard (2017) discovered that National Board-certified teachers could efficiently work with different institutions and co-educators in earlier investigations. This finding means that certified teachers lived through different situations, visited different institutions, organized seminars, symposiums, and cultural ceremonies, and during these programs, met with different stakeholders such as supervisors, co-supervisors, teachers, colleagues, and other people who were extroverts because they had ideas, sharing thoughts and views, generating new ideas and collaborating with others.

Additionally, three themes emerged when discussing the leadership roles of certified teachers, such as student performance, colleague improvement, and college development. To increase student achievement, professionally certified teachers in the department organize seminars, symposiums, and career development programs and motivate students to prepare for better job knowledge and thinking skills. By modifying the old teaching methods and examination systems, they intend to use formative assessment to test students' understanding and provide feedback and encouragement for further improvement. This finding is supported by Goldhaber & Brewer (2000), who found substantial evidence that students perform better in mathematics when taught by teachers who have standard certification in mathematics, compared to students whose teachers are not certified subject. However, this finding contradicts Kusumawardhani (2017), who found no considerable evidence that certified teachers improve students gaining knowledge of outcomes. Professionally certified teachers motivate their colleagues to pursue higher education and further their education. They share their ideas with their colleagues and push them to improve their teaching and learning skills (Harris & Muijs, 2004). These roles are associated with the idea of teacher leadership: "the technique by way of which teachers, both individually and collectively, inspire their colleagues, principals, and other contributors of an academic organization to boost strategies of guidance and mastering to enhance student getting to know and achievement" (York-Barr & Duke, 2004). Teacher leaders guide and influence colleagues to improve teaching and learning results (Katzenmeyer & Moller, 2009). This influence is exercised through formally empowered leadership based on formal positions or roles in the organizational hierarchy of the college or through informal leadership embedded in the culture of the college and recognizing the dynamic potential of all certified teachers to function as part of the leadership of their roles. Certified teachers serve on various committees and perform additional duties such as hall supervisors, delegates to other organizations, and research unit members for college journal publications (Cannard, 2017).

Professionally certified teachers play varied formal and informal leadership roles in an educational setting, such as supervising teachers, department heads, and members of various committees, institution representatives, and teachers 'councils (Bond,2022). In the explanation, the certified teachers stated that they work in a research cell, work in various committees to celebrate national and international days, and work as superintendents in student residences with the consent of the college authority. They are also sent as representatives to various educational institutions in the absence of the college principal. However, younger certified teachers pointed out that college authorities ignore them when improving the college, even if they can. Essentially, senior certified teachers receive support from principals to fulfil their leadership responsibilities. In contrast, younger certified teachers do not receive this support and cannot assume leadership roles to improve the college environment. So they are dissatisfied.

Two themes, including structural and professional barriers, also appeared regarding impediments. According to this study's findings, professionally certified teachers face a top-down approach in terms of making decisions and following the rules and regulations. This finding aligns with the findings of (Hossain et al. (2023), who found that the traditional hierarchy model hinders leadership practices in Bangladeshi educational institutions. In addition, according to other empirical studies, traditional school structures and a top-down management model present several challenges for teachers who want to fulfil favours positions

in their leadership responsibilities and achieve autonomy in educational institutions (Hunzicker, 2017; Wenner & Campbell, 2017; Hossain et al., 2023). In explanation, the institution under study is a government institution. Thus, all rules and regulations are predetermined and controlled by a bureaucratic structure, where decisions are made in an academic council meeting and enforced by professors.

Additionally, the institution under study needs a collaborative environment, and there is a lack of interaction between senior and younger teachers that constrains leadership practices. This finding concurs with the finding of Fernandez-Chung et al. (2024), who found a lack of teacher interaction in colleges in Bangladesh and discovered a similar pattern of outcomes. The plausible explanation is that teacher collaboration practices are challenging in Bangladeshi college education since instructors are divided into different groups depending on political viewpoints. Another promising finding is that the principal favours teachers with political ties and chooses leaders from among the teachers who hang out with him. Murphy et al.'s (2009) findings that the principal becomes prejudiced in selecting teacher leaders, leading to the curtailment of leadership responsibilities, are consistent with this outcome. In Bangladesh's higher education system, in particular, principals are chosen based on their political ideologies; as a result, they support the ruling party without considering the teachers' skills and experience, preventing those with professional credentials from holding leadership positions.

Additionally, because their colleagues envy their leadership positions, certified teachers feel less connected to them when engaging in leadership activities. It is crucial to underline that because there are few strong relationships among teachers, most educators are not accustomed to considering other educators as leaders. This result supports Koppich et al. (2006), who discovered that NBCTs encountered significant opposition from co-teachers—even those in lower management positions—in a more extensive examination of school culture. Contrary to what Loeb et al. (2010) discovered, National Board-Certified instructors participate in various leadership activities, and many claim that doing so has gained them a lot of respect and support from other people. This finding is crucial since teacher leaders' success is heavily influenced by their ability to win over their peers' respect and trust (York-Barr & Duke, 2004).

On the contrary, this study contradicts the finding of Gumede (2011), who found that teachers need more time to participate in leadership roles. Another notable finding is that certified teachers receive little financial incentive to complete certification programs and no reward or incentive for effective teaching and learning in the classroom. In addition, lack of timely promotion increases mental melancholy and dissatisfaction among certified teachers. This finding is very terrible because the certified teachers are dissatisfied with their work because they are not offered good promotions after completing the professional certification in college education in Bangladesh, hindering their leadership roles.

5. CONCLUSION

Professionally certified college teachers perform both formal and informal leadership roles inside and outside the classroom better than in their previous positions. This is because professional certification programs have made them leaders, enhancing their pedagogical, professional, research, and collaborative skills. They adopt innovative teaching approaches, immerse themselves in teaching innovatively and reflectively, and have the confidence to interact with co-teachers and delegates from different organizations. In addition, they play an essential role in improving colleges by improving student performance, developing other teachers' teaching and learning methods, and serving on various academic committees. They motivate students to better careers and organize seminars, symposia, and career-enhancing activities to improve student performance. They take innovative measures to improve student achievement by modifying established teaching approaches and assessment systems. Additionally, they encourage their colleagues to acquire additional higher degrees and exchange innovative concepts and teaching strategies to enhance their methods of instruction. However, they confront institutional impediments to leadership positions because decisions are made from the top and imposed on the down. Besides, certified teachers lack a collaborative environment due to their political differences. They are subject to external political pressure if they are committed to ensuring the quality of education or the betterment of the college environment. They received no reward or little financial incentive for their certification programs and excellent classroom teaching skills.

Some criticism should be levelled at this study. To begin, the data for this study came from professionally certified teachers at one government college in Bangladesh, which may impede the

generalizability of the findings. It is recommended for future researchers to collect data from large sample sizes from different public and private colleges to enhance the reliability and trustworthiness of the findings. Second, this research was conducted using a qualitative method; mixed methodologies combining both qualitative and quantitative approaches would be preferable for future studies to gain a comprehensive understanding of how professionally certified teachers play roles in student achievement and college improvement. Additionally, future studies can focus on exploring the impact of teachers' professional certifications on student achievement, colleagues' professional development, and overall college improvement from students', teachers' and principals' perspectives. Furthermore, future research can focus on the comparison between professionally certified teachers and non-certified teachers' leadership roles in college education improvement.

The above limitations do not negate the value and implication of this study. The findings cast new light on understanding how professional certification programs contribute to making teachers leaders and the roles they play inside and outside the classrooms for overall college improvement. The findings can be valuable resources for policymakers to formulate policies to take the initiative to enhance the facilities for professionally certified teachers in college education in Bangladesh. Besides, it can give new insights for principals to harness the potential of certified teachers for college education improvement and to ensure a congenial environment where certified teachers can play their leadership roles. Further, it may encourage non-certified teachers to pursue relevant professional certifications to develop their leadership skills and professionalism.

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