Personal and Professional Networks: An Opportunity for Teacher Professional Development

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Abstract:

A rewarding and challenging job, teaching offers both satisfaction and challenge. A professional teaching network that is well-maintained allows for both professional and personal development. According to the study piloted by Mizell (2010), a student's academic success is heavily influenced by the quality of their instruction. Parents may not be aware of the research involved, but they are united in their desire to provide excellent education to all of their children on a regular basis. In a view to meet this need, the most effective method is to engage in professional growth (Mizell, 2010). As stated by Darling-Hammond et al., (2009) and K. Vangrieken et al., (2017), to improve the quality of instruction and student learning, teachers must have access to advanced professional development options. Professional development, often known as "continuing education," offers professionals the tools needed to succeed in their chosen field. Professional learning is more than just training, and it is critical for both employers and employees to understand the difference between the two terms. Hence, the study's objective is to determine the need for informal personal and professional development through professional networks in India.

The data of 90 senior secondary teachers have been collected via judgemental sampling method. Education boards at the state, national, and international level have equally participated in the study. Further, data reliability has been evaluated via Cronbach alpha (0.916), and omega (0.915), and validity has been assessed via AVE (0.523) and CR (0.959). Primary and significant reasons for informal personal and professional development through professional networks, as per the senior secondary teachers in Bangalore, India, are decision making, self-efficacy, and professional development. A correlation was found for decision making with self-efficacy (65.7%), and with professional development (69.1%). Additionally, the study also revealed that none of the education boards ignore the growing importance of social networking services (SNS) in the teaching-learning process. In fact, international board teachers were found to be the ones who use SNS extensively, followed by national and state board teachers. The top five SNS used by these teachers are as follows: Zoom (73.3%), WhatsApp (70.0%), E-mail (61.1%), Facebook (52.2%), YouTube (47.8%), TedEd (47.8%).

1. Introduction

Education is a never-ending learning circle that will continue long after one has begun their professional career. Continued education may benefit people passionate about their jobs, as it allows them to continually improve their abilities while becoming more proficient in their roles and responsibilities. Professional development opportunities for teachers are significant in primary and secondary education management to ensure that their students receive the best possible learning outcomes, and that they are more effective and fulfilled in their role as leaders of learning. Policies, educational technology standards, and curricula for school districts are all susceptible to ongoing change. Teachers must work

extremely hard to regularly keep up with the current trends and best practices in their respective industries. This is where professional development comes into the picture. A structured procedure, such as a seminar, conference, or workshop, collaborative learning among members of a working team, or a course at a university or college, is frequently referred to when "professional development" is used. On one hand, professional growth might occur in more informal contexts, such as chats among co-workers, individual reading and research, observations of a colleague's work, or other learning from a colleague. On the other hand, professional development refers to several educational experiences relevant to an individual's professional development. A resource such as this one allows educators to expand on their existing subject-area expertise, while also receiving mentorship and the opportunity to acquire new teaching techniques. OECD (2005) defines professional development as a never-ending process that includes training, practice, and feedback, plus enough time and follow-up support. Teachers are engaged in activities similar to those they would do with their students in successful programmes, which support teachers' learning communities. There is much interest and emphasis in transforming schools into learning organisations, and making it easier for teachers to share their knowledge and experience, both systematically and formally. However, OECD (1998) claims that the growth of instructors beyond their organised and formal training can serve a variety of purposes, including the following:

- To keep the person's knowledge of a subject up-to-date in light of recent breakthroughs in the field.
- The creation of new teaching methodologies and objectives, as evolving conditions and educational research necessitates updating individuals' abilities, attitudes, and approaches.
- To provide individuals with the knowledge and skills necessary to implement changes to curricula or other aspects of their teaching practice.
- To provide schools with the tools they need to create and implement new tactics related to the curriculum and other dimensions of their teaching practice.
- To facilitate the exchange of information and experience among instructors and others, such as academics and businesses.
- To assist less-effective teachers in becoming more effective.

Professional development experience serves as a "boot camp" for those who approach networking with an opportunity-oriented mindset (Llopis, 2012). In addition, the author asserts that effective networking requires putting ideas to the test, polishing communication skills, and improving executive presence regularly. Networking is the practice of developing and maintaining long-term, mutually beneficial relationships with people encountered in various locations and circumstances. Interactions with others from diverse backgrounds, such as multiple professions, countries, and cultures, broadens a person's horizons. Individuals of varying ages, experiences, and perspectives contribute to the growth of one's attitude and mindset through their encounters and interactions.

Additionally, networking teaches one how to be a more effective team member by being receptive and empathetic. Networking is possible on both a personal and professional level. According to Ibarra & Hunter (2007), personal networks are primarily external, consisting of discretionary connections to people with whom we share something, such as parents and internal and external educational mentors. As a result, the strength of a personal network is determined by its referral capacity. According to the well-known "six degrees of separation" principle, our personal contacts are helpful to the extent that they enable us to contact the far-flung individual who possesses the knowledge we require, with the fewest possible connections. Thus, personal networking has traditionally benefited individuals in widening their social networks and forming friendships.

In contrast, professional networking is significantly more focused on what individuals do, their industry, who they know, and their long-term objectives. "It is not what you know, but who you know," as the saying goes, which is unquestionably true when it comes to successful professional networking. A professional learning network (PLN) is defined by Trust (2012) as a network of social interactions and resources that promotes informal learning. Furthermore, with the emergence of the Internet, the process

of networking has been substantially less complex. With the press of a button and the use of a search engine, we can find professionals near and far who share our interests in profession, corporation, and similar tasks. Doğan & Adams (2018) and V. Vescio et al., (2008) believe that collaboration among teachers in professional learning communities is an exciting new model of professional development that has the potential to significantly improve educational quality. However, Cachia et al., (2007) and Ellison et al., (2007) believe that professional networks can be found in various locations, both online and offline (face to face). The following are some of the most common areas where people network with one another:

●Networking events (one of the most common venues for people to meet and mingle)
●College alumnae events & career fairs
●Industry & trade associations
●Conferences and trade shows
●A current place of employment
●Community groups and events
●Chamber of Commerce events
●Online social media networks

As a result, it would not be erroneous to state that professional and personal networking have their own set of applications, none of which can be considered complete. Professional networks offer a wide range of assistance to end-users attempting to advance their careers in their respective fields of expertise. Personal networks provide users with a platform on which to exhibit themselves in new and innovative ways. These social networks offer a unique platform for individuals to associate, communicate, have fun, and work together to create a better, brighter future for themselves and others.

2. Objectives
1. To study the need for informal professional development through professional networks in India.
2. To review the literature on professional networks in India and their impact on learning.

3. Literature Review
To respond to social changes and situational obstacles as they arise, teachers, institutions, and education systems must constantly update and expand their knowledge. This is true, in particular, for higher education. Popp et al., (2014) asserted that networks could be utilised to collaboratively solve complex problems that emerge across organisational, geographic, professional, and industrial barriers.

Networks run for a more extended period and emphasise more on giving mutual support for the participants. They provide a "safe" atmosphere where participants feel secure and comfortable sharing their issues and disputes. This is why networks can serve as an effective paradigm for addressing professional practice transformation. According to Hannaghan (2019), school leaders all over the country are striving to strike a balance between the duties of their positions and opportunities to protect their personal well-being, while also improving student accomplishment levels. In addition to being excellent collaborators, educators also have excellent interpersonal skills which they use to maximise the value of collaboration. This mindset has now permeated social media platforms, where individuals can develop liberating connections and associations with others who work in the educational sector. The following are some of the additional advantages that networking provides to teachers:
• Hone one's abilities and expand knowledge
• Re-ignite one's sense of purpose and motivation
• Collaborate with like-minded colleagues to develop solutions
• Be the change you wish to see in the world of education
• Identifying potential employment options in the future

Carpenter & Linton (2016) and Desimone (2009) assert that different types of informal professional development exist that teachers participate in and are connected to. These include study groups, Edcamp conferences, classroom observations, and conversations with colleagues (Kynt et al., 2016; Richter et al., 2011). Traditional professional development, which is frequently driven by specific objectives, can be supplemented with more casual professional learning events that can address the overall requirements of teachers. Education can benefit from informal learning opportunities because they allow educators to co-create knowledge for their profession in cooperation with peers, colleagues, and other persons located in the same geographic area. On the other hand, such professional developments are less widely-researched than formal professional development (Kynt et al., 2016). Thus, there is still a need for additional insight into how informal learning may be supported, promoted, and developed.

In recent years, a growing number of teachers have begun to rely on Internet resources, expanding their informal learning intentions into the digital realm. As described by Jenkins et al., (2009), internet-based spaces serve as "perfect learning environments" because they enable peer-to-peer learning possibilities with participants who engage in several ways based on their preferences, capabilities, expertise, or requirements. Likewise, Gee (2004) argued that digital technologies could facilitate informal learning by linking individuals who share the same interests and become more approachable due to the condensed time and space limitations.

The establishment of professional learning networks provides new opportunities for teachers to learn and develop as professionals, while receiving assistance from a broad network of people and resources. With recent technological developments and ubiquitous Internet access, teachers may extend their network of connections beyond their in-person networks, seek aid and emotional support, and accumulate vast amounts of professional information at any time and from any location (Hur & Brush, 2009; Trust, 2012). Furthermore, professional learning networks are distinct from online communities, professional networks, and social media platforms (Brown & Duguid, 2000). Online communities are composed of individuals who come together to accomplish a shared objective, but a network is defined as "a collection of networks and links with a learning criterion" (Wenger et al., 2011). Social media platforms are online technologies that allow individuals to interact and communicate with one another. Each of these words relates to a distinct mode of communication. PLNs are more comprehensive, multidimensional systems that frequently include numerous communities and locations that facilitate both digital and physical learning.

According to Bridgstock (2016) and Rheingold (2012), the ability to access, interpret, and use social media for professional objectives and goals, both online and in-person, is referred to as "social network literacy." When teachers connect with their professional learning networks, they demonstrate varying levels of social network knowledge. Social network literacy is exhibited by interactions with purposefully smaller networks that assist in information flow regulation for teachers who acquire technical competence via networking. While expanding their horizons, teachers experiment with new platforms and develop strategies for leveraging an increased number of connections and information sources. Thus, it would not be inaccurate to assert that the teacher education possibilities made available through the network programs investigated possess several favourable characteristics. This consisted of highly engaged core teachers, high-quality instructional materials, teaching techniques related to local objectives, and school leadership support among other components. Furthermore, increased social network literacy among teachers allows them to enhance learning experiences by shifting students between online and offline environments, and across numerous platforms as needed. So, when instructors participate in a PLN, they no longer see themselves as solitary teachers, but rather as linked professionals who are aided by their personal learning networks.

4. Research Methodology

The survey questionnaire method has been adopted for 32 questions, wherein 22 statements are on a 5-point Likert scale. These statements are primarily on understanding the reason for using social networks for personal and professional use in India. In the study, respondents are senior secondary school teachers in Bangalore. Out of 90 teachers, 30 each are from the state, national, or international board. Data has been collected via judgemental sampling. The comprehensive questionnaire is divided into three parts. In the first part, socio-demographic variables like teacher experience, gender, and qualification have been discussed. The second part of the questionnaire includes statements on time spent on social media, school or institution support, the use of SNS for networking, type of social media network used, and so on. Finally, in the third section, statements on the reasons for using SNS have been included. SPSS software is considered for assessing the significance level. Methods such as Cronbach's alpha, omega, frequency distribution, rank test, and Kruskal-Wallis Test are used to justify the research objective.

The study has two objectives: the first objective is studied via the statistical method through primary data, and the second is examined via a literature review of previous research. All of the results have been analysed and presented at a 95% confidence level.

5. Data Analysis

L. Deng (2016) measurement of reliability is the key to any research. Multiple measures, such as coefficient of alpha (α) and omega (ω), are now the standard measures to validate the reliability of the data. As per Graham (2006), coefficient alpha undervalues the true and significant reliability unless the items are tau-equivalent. Therefore, coefficient omega (ω) has been introduced as an alternative to coefficient alpha (α). In the study, reliability via Cronbach's alpha is 0.916 and omega is 0.915. In both cases, the reliability value is higher than 0.70 (Cronbach, 1951). Hence, the data is found to be very reliable for the study.

Table-1 Data Reliability

No. of Statements	Cronbach's Alpha	Omega
22	0.916	0.915

For validity, convergent validity has been used wherein average variance extracted (AVE) and composite reliability (CR) have been calculated. Convergent validity shows the extent of the indicator of a specific construct converge (Black et al., 2010). There are various ways to ascertain convergent validity, such as factor loading, reliability, or AVE and CR. In the study, AVE and CR is used to evaluate the data validity. The tolerance limit of AVE should be more than 0.5, and CR is more than equal to 0.70 (Black et al., 2010). In the demonstrated Table-2 below, the value of AVE is 0.523, and CR is 0.959. Factor loading at each statement is also greater than 0.40. This infers that there is more than 50% variance in a given data set. This ensures convergent validity in the latent constructs for the gathered data. The overall mean and standard deviation of the data is 2.99±1.18, with a correlation of 0.552.

Table-2 Reliability and Validity at Statement Level

Statements	N	Mean±Std	Item Correlated	Cronbach Alpha	Factor Loading	AVE	CR
To monitor academic programs	90	3.18±1.32	0.666	0.909	0.936		
To make decisions about the implementation of new programs in the school	90	2.81±1.16	0.641	0.910	0.803		
To be involved in the school budget decisions	90	3.13±1.32	0.516	0.913	0.655		
To be involved in guiding/supporting/mentoring other teachers	90	2.81±1.20	0.449	0.914	0.514		
To determine my own schedule in the school	90	3.17±1.31	0.624	0.910	0.805		
To be part of the hiring process	90	2.83±1.18	0.514	0.913	0.580		
To advise the school administration and teachers about matters in the school	90	2.23±1.19	0.371	0.916	0.439		
To create opportunities for professional growth for myself	90	2.97±1.19	0.566	0.912	0.669		
To be treated as a professional	90	3.15±1.10	0.492	0.913	0.498	0.523	0.959
To create opportunities for continued learning for myself	90	3.06±1.31	0.589	0.911	0.781		
To have the opportunity to collaborate with other teachers in my school	90	2.96±1.17	0.528	0.912	0.663		
To collaborate with teachers from other schools	90	3.21±1.10	0.710	0.909	0.835		
To choose the type of professional development I need	90	2.72±1.30	0.444	0.914	0.588		
To share my expertise with other teachers	90	2.83±1.25	0.469	0.914	0.62		
To believe that I am empowering students (personally)	90	3.18±1.14	0.505	0.913	0.656		
To believe that I am involved in an important program for children	90	3.23±1.04	0.616	0.911	0.73		

Statements	N	Mean±Std	Item Correlated	Cronbach Alpha	Factor Loading	AVE	CR
To believe that I am making a difference in a student's life	90	3.16±0.92	0.592	0.912	0.618		
To believe I am effective	90	2.82±1.28	0.611	0.911	0.856		
To believe that I can effectively teach the subject content	90	3.04±1.14	0.725	0.908	0.906		
To be convinced that, as time goes by, I will continue to become more capable of helping to address my students' needs	90	2.96±1.17	0.597	0.911	0.715		
To be confident in my ability to respond to my students' needs even if I am having a bad day	90	3.2±1.02	0.444	0.914	0.854		
To believe that I can develop creative ways to cope with system constraints and continue to teach well	90	3.03±1.13	0.475	0.913	0.903		

Further, 64.4% female and 35.5% male senior secondary school teachers have participated in the survey. Most of the teacher participants have experience of 8-12 years (35.5%), followed by more than 12 years (27.7%), and 4-7 years (24.4%). The remaining 12.2% of teachers have teaching experience of 1-3 years. Regarding qualification, most of these teachers carry master's degrees (83.3%), followed by Ph.D. scholars (8.8%). There are only 7.7% of teachers whose qualification is a bachelor's degree. 68.8% of these teachers spend 1-2 hours on social media networks, followed by 3-5 hours (14.4%), and more than 5 hours (6.6%).

Table-3 Socio-demographic Profiling of Teachers

Teachers Profile		Board of Education			Total
		State Board	National Board	International Board	
Gender	Male	12(13.3%)	5(5.5%)	15(16.6%)	32(35.5%)
	Female	18(20%)	25(27.7%)	15(16.6%)	58(64.4%)
Total		30(33.3%)	30(33.3%)	30(33.3%)	90(100%)
Experience	1 to 3 years	9(10%)	2(2.2%)	0(0%)	11(12.2%)
	4 to 7 years	8(8.8%)	6(6.6%)	8(8.8%)	22(24.4%)
	8 to 12 years	9(10%)	12(13.3%)	11(12.2%)	32(35.5%)
	> 12 years	4(4.4%)	10(11.1%)	11(12.2%)	25(27.7%)
Total		30(33.3%)	30(33.3%)	30(33.3%)	90(100%)
Highest Qualification	Bachelor's Degree	1(1.1%)	3(3.3%)	3(3.3%)	7(7.7%)
	Master's Degree	28(31.1%)	24(26.6%)	23(25.5%)	75(83.3%)

|	PhD Scholar	1(1.1%)	3(3.3%)	4(4.4%)	8(8.8%)
Total		30(33.3%)	30(33.3%)	30(33.3%)	90(100%)
Hours Spent on SNS	**None**	7(7.7%)	1(1.1%)	1(1.1%)	9(10%)
	1-2 hours	21(23.3%)	21(23.3%)	20(22.2%)	62(68.8%)
	3-5 hours	2(2.2%)	4(4.4%)	7(7.7%)	13(14.4%)
	> 5 hours	0(0%)	4(4.4%)	2(2.2%)	6(6.6%)
Total		30(33.3%)	30(33.3%)	30(33.3%)	90(100%)

In India, the initial use of the digital platform was to exchange email; however, this has changed. The digital platform has evolved into a digital cosmos, with many SNS giants such as Zoom, WhatsApp, Email, Facebook, YouTube, TedEd, and many more. According to Keelery (2021), there are more than 680 million active cyberspace users. The reason for this is greater accessibility and the convenience of using SNSs. In addition, Keelery states that there are 448 million active social media users in India, and the enormous penetration is on networks like Facebook and YouTube. As per the senior school teachers in Bangalore, India, the top five social networking sites are as follows: Zoom (73.3%), WhatsApp (70.0%), E-mail (61.1%), Facebook (52.2%), YouTube (47.8%), TedEd (47.8%).

Table-4 Type of Social Network Site

SNS	Count	%	Rank
WhatsApp	63	70.0%	2
Facebook	47	52.2%	4
Twitter	10	11.1%	17
Google Plus	14	15.6%	16
LinkedIn	33	36.7%	9
Instagram	17	18.9%	13
RSS	7	7.8%	20
YouTube	43	47.8%	5
Snapchat	10	11.1%	17
Email	55	61.1%	3
Quora	17	18.9%	13
Reddit	6	6.7%	21
Scribd	10	11.1%	17
SlideShare	23	25.6%	11
Wikipedia	37	41.1%	7
Blogs	19	21.1%	12
Discussion boards & forums	36	40.0%	8
Zoom	66	73.3%	1
Telegram	24	26.7%	10
Edmodo	15	16.7%	15
TedEd	43	47.8%	5
Vimeo	2	2.2%	22

Figure-1 Use of SNS by Sr. Secondary Teachers
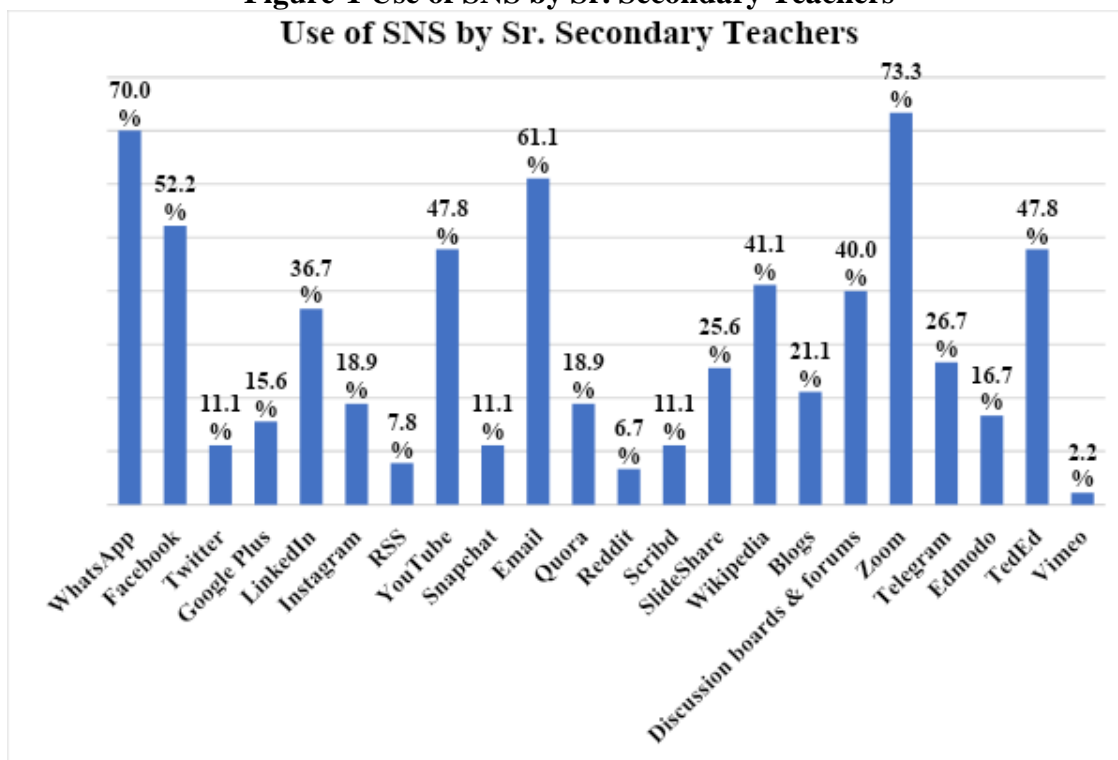
In the last couple of years, social networking has grown in popularity as an open-source style of knowledge and information exchange platform. In fact, educational institutions have also begun interacting with students through social networking tools, such as Zoom, WhatsApp, etc. It has also been observed that nowadays, teachers take advantage of social networking potential to improve their overall teaching knowledge and process. In the study, the Kruskal-Wallis non-parametric test is used to assess the main reasons teachers use SNS for their personal and professional network in India. In the test, the dependent variable is the reason to use SNS, and the independent variable is the education board. According to the results, the main reason for using SNS by professionals is to impact decision making (H-value=26.037, sig=0.00), self-efficacy (H-value=28.077, sig=0.00), and professional growth (H-value=31.035, sig=0.00). The significance level for all three parameters is less than 0.05. Here, mean rank test data also reveals that teachers from the international board (DM: 61.22, SE: 63.67, PG: 62.02) use these SNSs often, followed by the national (DM: 48.10, SE: 44.82, PG: 49.37) and state boards (DM: 27.18, SE: 28.02, PG: 25.12). The degree of freedom for the data is 2 (n-1). Hence, it can be inferred that there is a significant need for informal personal and professional development through professional networks in India.

Table-5 Kruskal-Wallis Test on the Reasons to Use SNS

Reasons to Use SNS		Board of Education	Ranks		Kruskal-Wallis Test		
			N	Mean Rank	Kruskal-Wallis H	df	Sig.
Decision Making	To monitor academic programs	State Board	30	28.65	22.32	2	0.00
		National Board	30	48.90			
		International Board	30	58.95			
		Total	90				
	To make decisions about the	State Board	30	28.27	22.69	2	0.00
		National Board	30	49.62			
		International	30	58.62			

	implementation of new programs in the school	Board					
		Total	90				
	To be involved in the school budget decisions	State Board	30	34.85			
		National Board	30	49.02			
		International Board	30	52.63	8.25	2	0.02
		Total	90				
	To be involved in guiding/supporting/mentoring other teachers	State Board	30	34.08			
		National Board	30	46.47			
		International Board	30	55.95	11.17	2	0.00
		Total	90				
	To determine my own schedule in the school	State Board	30	32.17			
		National Board	30	50.47			
		International Board	30	53.87	12.81	2	0.00
		Total	90				
	To be part of the hiring process	State Board	30	33.20			
		National Board	30	46.10			
		International Board	30	57.20	13.44	2	0.00
		Total	90				
	To advise the school administration and teachers about matters in the school	State Board	30	42.93			
		National Board	30	40.43			
		International Board	30	53.13	4.32	2	0.12
		Total	90				
Self-Efficacy	To create opportunities for professional growth for myself	State Board	30	28.95			
		National Board	30	48.95			
		International Board	30	58.60	21.59	2	0.00
		Total	90				
	To be treated as a professional	State Board	30	37.33			
		National Board	30	42.82			
		International Board	30	56.35	9.38	2	0.01
		Total	90				
	To create opportunities for continued learning for myself	State Board	30	34.97			
		National Board	30	43.72			
		International Board	30	57.82	12.36	2	0.00
		Total	90				

	To have the opportunity to collaborate with other teachers in my school	State Board	30	25.72	28.31	2	0.00
		National Board	30	53.83			
		International Board	30	56.95			
		Total	90				
	To collaborate with teachers from other schools	State Board	30	30.72	24.12	2	0.00
		National Board	30	43.77			
		International Board	30	62.02			
		Total	90				
	To choose the type of professional development I need	State Board	30	39.88	8.39	2	0.02
		National Board	30	40.13			
		International Board	30	56.48			
		Total	90				
	To share my expertise with other teachers	State Board	30	39.42	8.04	2	0.02
		National Board	30	40.90			
		International Board	30	56.18			
		Total	90				
Professional Growth	To believe that I am empowering students	State Board	30	34.87	11.86	2	0.00
		National Board	30	44.50			
		International Board	30	57.13			
		Total	90				
	To believe that I am involved in an important program for children	State Board	30	34.47	13.98	2	0.00
		National Board	30	43.70			
		International Board	30	58.33			
		Total	90				
	To believe that I am making a difference in a student's life	State Board	30	32.90	11.91	2	0.00
		National Board	30	50.02			
		International Board	30	53.58			
		Total	90				
	To believe I am effective	State Board	30	27.45	24.74	2	0.00
		National Board	30	50.23			
		International Board	30	58.82			
		Total	90				
	To believe that I can effectively teach the subject content	State Board	30	27.07	25.33	2	0.00
		National Board	30	51.37			
		International Board	30	58.07			
		Total	90				
	To be	State Board	30	26.93	24.92	2	0.00

convinced that, as time goes by, I will continue to become more capable of helping to address my students' needs.	National Board	30	53.35				
	International Board	30	56.22				
	Total	90					
To be confident in my ability to respond to my students' needs even if I am having a bad day.	State Board	30	33.02				
	National Board	30	50.65		11.23	2	0.00
	International Board	30	52.83				
	Total	90					
To believe that I can develop creative ways to cope with system constraints & continue to teach well.	State Board	30	38.25				
	National Board	30	41.07		9.91	2	0.01
	International Board	30	57.18				
	Total	90					

6. Discussion and Findings

Teaching is a rewarding and responsive profession, and maintaining a professional teaching network aids in professional and personal growth. According to Riina et al., (2012), developing a professional network for educators is critical, because it enables educators to expand their influence beyond the classroom, share curricula, and gain new teaching practices. In addition, networking allows instructors to make a favourable impression on prospective employers and compensate for their lack of professional experience. In the study, 90 teachers from different boards were approached to share their personal and professional networking views. Out of these 90 teachers, 32 (35.5%) teachers were male, and the remaining 58 (64.4%) were female.

Further, 88% of these teachers have more than three years of working experience, and 83% of them carry master's degrees, followed by PhD doctorates (8.8%). Besides that, 62% of the teachers spent at least 1-2 hours daily on social networking sites, followed by 3-5 hours (14.4%) and more than 5 hours (6.6%). According to Jain (2019), social networking platforms like Google, Facebook, Zoom, LinkedIn, etc., are used by a substantial Indian population. The main objective of these social networking channels is to collaborate, network, share, learn, and engender content and knowledge of great value in education or any other sector. In the study, as per the senior school teachers in Bangalore, the top six social networking sites used by them are as follows: Zoom (73.3%), WhatsApp (70.0%), Email (61.1%), Facebook (52.2%), YouTube (47.8%), TedEd (47.8%).

Regarding the specific need for informal personal and professional development through professional networks in India, the reasons are as follows:
● Decision making
● Self-efficacy
● Professional development

In the study, as per the senior secondary teachers for decision making, the most significant reasons to use SNS is to monitor academic programs (51.1%), determine own schedule in school (51.1%), and the involvement of a teacher in school budget decisions (48.9%). For self-efficacy, the most fundamental reasons to use SNS are to collaborate with teachers from other schools (48.9%), create opportunities for continued learning (45.6%), and develop opportunities for professional growth (42.2%). Finally, for professional development, the most fundamental reasons to use SNS is to believe the self-involvement in online programs for children (47.8%), empowering students (personally) (44.4%), able to teach online effectively (43.3%), and be capable of helping students in addressing problems online (43.3%).

7. Conclusion

Overall, decision making, self-efficacy, and professional development are the three primary and significant reasons for informal personal and professional development through professional networks, as per the senior secondary teachers in Bangalore, India. Further results also reveal the significant and positive correlation between decision making with self-efficacy (65.7%) and professional development (69.1%). According to Maria Sideri et al., (2019), social media benefits in the education world include increased participation, interaction, and transparency. In addition, collective intelligence, reduction in the response time, and a higher degree of satisfaction with stakeholders are also a few crucial reasons for networking. This has been illustrated and demonstrated by the sample respondents. Besides that, Bangalore senior secondary school teachers also revealed that nowadays, none of the education boards is ignoring the growing importance of SNS in the teaching-learning process. In fact, results indicated that international board teachers are the ones who use SNS extensively, followed by national and state boards. Further, teachers added that SNS not only connects them with relevant material and learning groups, but also helps them in connecting with other educational systems, which makes their learning process engaging and fascinating.

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