

Gender Differences in Primary School Teachers' Perceptions of Self-Directed Professional Learning

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Abstract



In order to better understand how Primary School Teachers' perceive self-directed professional learning, a study was conducted to compare teachers' perceptions by gender. A self-created data collection tool, a questionnaire, was utilized. According to the study's findings, no significant difference exists between male and female perceptions of self-capability of identifying learning goals, effectiveness of learning from colleagues, awareness regarding available learning resources, knowledge about current challenges in education, and observing teaching methodologies of colleagues. It was also found that male and female PSTs know how to create a plan for their weak areas of teaching. They are capable of selecting the best method for their own learning and take responsibility for their own learning as well. According to the findings of the study, both male and female PSTs preferred peer coaching. They also observe and learn from their colleagues' experiences. Despite of the workload, a significant number of male and female PSTs engage themselves in self-directed learning. It is concluded that if PSTs have a choice in deciding learning type, they will choose self-directed learning over required professional learning sessions.

Keywords: Self-directed Professional Learning; Primary School Teachers; Gender Differences; Peer Coaching

Introduction

Professional development includes all activities that enhance the professional knowledge, skills and attitude of teachers as well as improve students' learning (Timperley, 2011; Timperley et al., 2008). It is essentially a deliberate process of achieving distinct and valuable objectives through the selection of clear content, explicit materials, and the development of planned procedures (Campbell, 2017). Professional development is extremely important for the advancement of education. Academic and professional education for teachers is required for effective knowledge transmission in the teaching learning process (Didion, 2020). According to Slavit and McDuffie (2013), when one accepts the responsibility of facilitating their own professional development, their learning becomes self-directed professional learning. According to Knowles (1975), self-directed learning is defined as a process in which an individual take initiatives with or without the support of others. Learners actively recognize their own learning needs and set learning goals, identify different resources, select and implement appropriate learning strategies and also evaluate learning outcomes by themselves (Didion, 2020).

In self-directed professional learning, teachers provide direction and impetus to their own professional learning through self-management, motivation, and oversight (Garrison, 1997; Didion, 2020). However, professional development and professional learning remained a grey area always. Kennedy (2016) described significant issue in the education field today by stating that educational research is currently at a stage where we possess strong theories regarding learning of students but we do not really have well-developed ideas regarding learning of teachers. Hence, there is a need to prepare the teachers to go beyond the mandated professional development opportunities organized for them. Instead, let the teachers take initiative for their professional learning and be self-directed in order to gain insights for solving teaching-learning problems.

It has been determined that self-directed professional learning has many advantages for each teacher as well as for the classroom, community, and beyond. As it offers enhanced and sustainable

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learning (Mushayikwa & Lubben, 2009). This education has been shown to boost teachers' motivation levels, improve job satisfaction, instil confidence in them, and give them a sense of control over their professional development (Beatty, 2000; Lopes & Cunha, 2017). Self-directed professional development also fosters the potential necessary for a collaborative learning environment among schoolmates (Coggshall et al., 2012; Nir & Bogler, 2008). Given that context, current study has given PSTs a voice in terms of what they want in terms of self-directed professional learning (SDPL). The purpose of this study was to examine primary school teachers' gender-based perceptions of self-directed professional learning and identifying needs that go beyond the courses and strategies available to educators to achieve their learning goals. The main goal was to investigate their perspective on performance improvement. Current research study also investigated whether PSTs preferred to self-study or require professional learning.

Study Objectives

The major objectives of the study were:

1. To find out perceptions of male and female primary school teachers regarding self-directed professional learning.
2. To determine significant difference between male & female teachers' perceptions regarding self-directed professional learning

Research Questions

Keeping in view the research objectives, following research questions were formulated;

1. What are the perceptions of male PSTs regarding self-directed professional learning?
2. What are the perceptions of female PSTs regarding self-directed professional learning?
3. What is the difference between the male and female PSTs perceptions regarding self-directed professional learning?

Hypothesis

The following hypothesis was tested in current study.

- H0. There is no statistically significant difference between male & female PST's perceptions regarding self-directed professional learning.

Methodology

In current study survey method was opted which helped in answering the research questions. It was a purely descriptive quantitative study where through survey questionnaire data was gathered from the in-service primary school teachers.

Participants

The study included 300 primary school teachers, out of which equal proportion was given to both genders i.e. 150 females and 150 male. The participants were selected based on the convenient sampling technique.

Instrumentation

A survey questionnaire was designed and developed which was used as a data collection instrument in this study. There were in total 40 different statements initially which focused on evaluating the perceptions of female and male PSTs on various aspects of self-directed professional learning. The questionnaire statements were created in accordance with the study's objectives and to answer the research questions. To collect different responses on each questionnaire item, a format containing five point Likert-Scale was used. Each statement was ranked by the responded from 1 to 5 by denoting Strongly disagreed with SD(1), disagreed with D(2), undecided as U(3), agreed with A(4), and strongly agreed with SA(5). The instrument was gone through the rigorous process of validation where multiple expert advices were taken. Keeping in view their suggestions or recommendations regarding the questionnaire, it was updated and finalized. Hence, 17 statements were finalized to be a part of the final version of the questionnaire. For ensuring the reliability of the developed instrument, pilot testing was done in 5 different schools, with 60 teachers in total. The alpha value of 0.76 showed that the instrument is reliable to use in the specific context.

Data Collection & Analysis

In order to distribute the survey questionnaire and collect data, the researcher visited various primary schools. The responses of the study participants were gathered in person. After the collection of data, responses of individuals were sorted out and tabulation form of data was determined. Initially, data was analysed through descriptive statistics where percentages of collected data & mean rank values were determined. Later on, the Mann Whitney U Test was performed with the help of SPSS.

Results

Planning and Setting Learning Goals

Table 1.1 *PSTs Perception regarding the planning and setting learning goals*

| Gender | SD | D | D | A | SA | Total | Mean.Rank |
|--------|----|----|----|-----|-----|-------|-----------|
| Female | 0 | 1 | 4 | 125 | 20 | 150 | 149.64 |
| | 0% | 1% | 3% | 83% | 13% | | |
| Male | 0 | 4 | 0 | 125 | 21 | 150 | 151.36 |
| | 0% | 3% | 0% | 83% | 14% | | |
| Total | 0 | 5 | 4 | 250 | 41 | 300 | |
| | 0% | 2% | 1% | 83% | 14% | | |

Value of Z = -0.266

According to the data mentioned in table 1.1, 14% of the total respondents of the study strongly agreed about the perception of planning as well as setting of learning goals by themselves. Similarly, 83% of the total respondents (male & female) agreed that it is simple to plan and set learning objectives. The Z value of -0.266 lies within the critical value (± 1.96) accepting null hypothesis indicating no significant difference exist between perceptions of male and females PSTs regarding the first statement.

Selection of Learning Methodology

Table 1.2: *Perceptions of learning methodology selection.*

| Gender | SD | D | UD | A | SA | Total | Mean.Rank |
|--------|----|------|----|-------|-------|-------|-----------|
| Female | 0 | 0 | 0 | 119 | 31 | 150 | 122.90 |
| | 0% | 0% | 0% | 79% | 21% | | |
| Male | 0 | 1 | 0 | 62 | 87 | 150 | 178.10 |
| | 0% | 1% | 0% | 41% | 58% | | |
| Total | 0 | 1 | 0 | 250 | 41 | 300 | |
| | 0% | 0.3% | 0% | 60.3% | 39.3% | | |

Value of Z = -6.497

Table 1.2 indicates that 58% of male respondents and 21% female respondents strongly agreed with the second statement. Furthermore, 41% male PSTs & 79% female respondents agreed choosing best techniques for their own professional education. This item's Z= -6.497 value did not fall within the critical value. Hence concluded that Male and Female PSTs' interpretations of the statement differ significantly.

Deciding the Strategies of Learning

Table 1.3: *Perceptions of deciding strategies of learning*

| Gender | SA | D | UD | A | SA | Total | Mean.Rank |
|--------|----|----|----|-----|-----|-------|-----------|
| Female | 0 | 0 | 6 | 124 | 20 | 150 | 136.38 |
| | 0% | 0% | 4% | 83% | 13% | | |
| Male | 0 | 0 | 0 | 106 | 44 | 150 | 164.62 |
| | 0% | 0% | 0% | 71% | 29% | | |
| Total | 0 | 0 | 6 | 230 | 64 | 300 | |
| | 0% | 0% | 2% | 77% | 21% | | |

Value of Z= -3.838

According to Table 1.3, 13% of female PSTs and 29% of male teachers strongly agreed with the statement. While 77% of the total respondents agreed with the statement that they are capable of deciding their own learning strategies. The Z value for the given statement (-3.838) does not lie within the critical value rejecting the null hypothesis. So concluded that significant difference exists between female and male PSTs regarding statement no 3.

Learning Responsibility

Table 1.4: *Perceptions of learning responsibility.*

| Gender | SD | D | UD | A | SA | Total | M.Rank |
|--------|----|-------|----|-------|-------|-------|--------|
| Female | 0 | 0 | 0 | 132 | 18 | 150 | 117.98 |
| | 0% | 0% | 0% | 88% | 12% | | |
| Male | 0 | 17 | 0 | 35 | 98 | 150 | 183.02 |
| | 0% | 11.3% | 0% | 23.3% | 65.3% | | |
| Total | 0 | 17 | 0 | 167 | 116 | 300 | |
| | 0% | 7% | 0% | 55% | 38% | | |

Value of Z= -7.402

Table 1.4 indicates that ratio of responses in terms of agreed and strongly agreed, for the statement no 4, is 55% and 38% respectively which shows majority number of participants take responsibility for their own learning. While only 11% male PSTs disagreed the given the statement. Z value (-7.402) for this particular statement lies outside the given acceptance range so null hypothesis is rejected. A significant difference exists between male and female respondents of the research study regarding SDPL.

Decision of Learning Objectives

Table.5 Perceptions of deciding on learning objectives.

| Gender | SD | D | UD | A | SA | Total | Mean.Rank |
|--------|------------|------------|---------|------------|-----------|-------|-----------|
| Female | 73 49% | 67 45% | 0 0% | 10 6% | 0 0% | 150 | 155.95 |
| Male | 82 54% | 63 42% | 0 0% | 4 3% | 1 1% | 150 | 145.05 |
| Total | 155 52% | 130 43% | 0 0% | 14 4.6% | 1 0.3% | 300 | |

Value of Z= -1.232

Table 1.5 shows that 1% male PSTs participating in the study were strongly favoured the statement. While, statement 5 was agreed to by 6% of female PSTs and 3% of male PSTs. None of the responses were deemed uncertain. 43% of total respondents (45% of females and 42% of males) disagreed with the statement. Similarly, 52% of total respondents (49% of females and 54% of males) strongly disagreed with statement no. 5.Z for statement has a value of -1.232, which is between ± 1.96 . The null hypothesis is therefore accepted, and it is concluded that there are no appreciable differences between female & male PSTs' perceptions of the given statement.

Peer Coaching

Table 1.6 shows how PSTs perceive peer coaching.

| Gender | SD | D | UD | A | SA | Total | Mean.Rank |
|--------|---------|---------|---------|------------|------------|-------|-----------|
| Female | 0 0% | 0 0% | 0 0% | 98 65% | 52 35% | 150 | 154.98 |
| Male | 0 0% | 0 0% | 0 0% | 105 70% | 145 30% | 150 | 146.02 |
| Total | 0 0% | 0 0% | 0 0% | 203 68% | 97 32% | 300 | |

Value of Z= -1.093

Table 1.6 shows that not a single respondent agreed, strongly disagreed with it, or expressed uncertainty about it. According to 70% of men and 65% of women who responded, peer coaching is more effective than outside mentoring. Since Z = -1.093 is in between the threshold of ± 1.96 , so null hypothesis is accepted, and concluded that there is no appreciable difference in how male and female PSTs perceive statement no. 6.

Students' Performance Evaluation and Professional Learning

Table 1.7: Perceptions of student performance evaluation and professional learning.

| Gender | SD | D | UD | A | SA | Total | Mean.Rank |
|--------|---------|---------|---------|------------|-----------|-------|-----------|
| Female | 0 0% | 0 0% | 0 0% | 111 74% | 39 26% | 150 | 168.11 |
| Male | 0 0% | 0 0% | 3 2% | 141 94% | 6 4% | 150 | 132.89 |
| Total | 0 0% | 0 0% | 3 1% | 252 84% | 45 15% | 300 | |

Value of Z= -5.532

According to Table 1.7, 26% of female PSTs and 4% of male respondents of the study strongly agreed the given Statement.84% of total PSTs participated in the study(74% female respondents and 94% male respondents) agreed with Statement No. 7.The null hypothesis is assumed to be rejected because Z = -5.532 is greater than the critical value of ± 1.96 . As a result, it was determined that male and female PSTs perceive the given statement in very different ways.

Observing Colleagues' Teaching Methodologies

Table 1.8: *Perceptions of observing colleagues' teaching methodologies.*

| Gender | SD | D | UD | A | SA | Total | Mean.Rank |
|--------|---------|---------|---------|------------|------------|-------|-----------|
| Female | 0 0% | 0 0% | 0 0% | 130 87% | 120 13% | 150 | 152.00 |
| Male | 0 0% | 0 0% | 0 0% | 133 89% | 17 11% | 150 | 149.00 |
| Total | 0 0% | 0 0% | 0 0% | 263 88% | 37 12% | 300 | |

Value of Z= -.526

In accordance with Table 1.8, 13% of female teachers and 11% of male teachers strongly agreed with the stated opinion. Similarly, 89% of men and 87% of women PSTs concurred that they occasionally observe their colleagues' teaching techniques. In relation to statement number 15, no additional responses were discovered. The critical range is contained by the value $Z = -.526$. The null hypothesis is therefore accepted, and it is concluded that there is no discernible difference in how male and female PSTs perceive the given statement.

Capabilities in Identifying and Correcting Teaching Flaws

Table 1.9: *Perceptions of capabilities in identifying and correcting teaching flaws.*

| Gender | SD | D | UD | A | SA | Total | Mean.Rank |
|--------|---------|-----------|---------|--------------|------------|-------|-----------|
| Female | 0 0% | 7 5% | 0 0% | 101 67% | 42 28% | 150 | 136.64 |
| Male | 0 0% | 2 1.3% | 0 0% | 134 89.3% | 14 9.3% | 150 | 164.36 |
| Total | 0 0% | 9 3% | 0 0% | 235 78% | 56 19% | 300 | |

Value of Z= -3.219

In accordance with the aforementioned table 1.9, 9.3% of men and 28% of women PSTs strongly agreed with the stated opinion. In a similar vein, 89.3% of men and 67% of women PSTs agreed with the statement. The null hypothesis is rejected because $Z = -3.219$ is less than the critical value of ± 1.96 . As a result, when it comes to identifying areas for improvement, male and female PSTs have very different perspectives.

Reflection on teaching

Table 1.10: *Perceptions of SDPL reflection on teaching*

| Gender | SD | D | UD | A | SA | Total | Mean.Rank |
|--------|---------|---------|---------|------------|-----------|-------|-----------|
| Female | 0 0% | 0 0% | 0 0% | 135 90% | 15 10% | 150 | 157.00 |
| Male | 0 0% | 0 0% | 0 0% | 148 99% | 2 1% | 150 | 144.00 |
| Total | 0 0% | 9 0% | 0 0% | 283 94% | 17 6% | 300 | |

Value of Z= -3.241

The statement was strongly agreed by 10% female respondents and 1% male respondents, according to the aforementioned table. The statement was also supported by 94% of total respondents participating in the study (90% of females and 99% of males). No PSTs, either male or female, were unsure, disagreed with, or strongly disagreed with statement number 17. Because $Z = -3.241$ is less than the threshold range of ± 1.96 , the null hypothesis is assumed to be incorrect. Because of this, statement no. 10 is perceived very differently by men and women in the PST.

Effects of SDPL on Students' Learning

Table 1.11. *Perceptions of how self-directed PL affects students' learning.*

| Gender | SD | D | UD | A | A | Total | Mean.Rank |
|--------|---------|---------|-----------|-------------|--------------|-------|-----------|
| Female | 0 0% | 0 0% | 0 0% | 45 30% | 105 70% | 150 | 133.30 |
| Male | 0 0% | 0 0% | 2 1.3% | 8 5.3% | 140 93.3% | 150 | 167.70 |
| Total | 0 0% | 0 0% | 2 0.6% | 53 17.6% | 245 81.6% | 300 | |

Value of Z= -5.121

According to Table 1.11, 93.3% of men and 70% of women who participated in the research strongly agreed that teachers' self-directed has a significant influence on students' learning. 5.3% of men and 30% of women agreed with the statement. $Z = -5.121$ is less than the critical value of ± 1.96 , which rules out the null hypothesis. As a result, there are notable differences between how male and female PSTs perceive the given statement.

Time Allocation

Table 1.12: *Perceptions of time allocation.*

| Gender | SD | D | UD | A | SA | Total | Mean.Rank |
|--------|---------|---------|---------|-----------|------------|-------|-----------|
| Female | 0 0% | 0 0% | 0 0% | 13 9% | 137 91% | 150 | 168.50 |
| Male | 0 0% | 0 0% | 0 0% | 49 33% | 101 67% | 150 | 132.50 |
| Total | 0 0% | 0 0% | 0 0% | 62 21% | 238 79% | 300 | |

Value of $Z = -5.125$

According to Table 12, 79% of all respondents (including 91% of female PSTs and 67% of male PSTs) strongly agreed that teachers should be given free time during the school day to develop their skills. In a similar vein, 21% (9% of females and 33% of men) agreed with the stated opinion. $Z = -5.125$ does not lie within the critical value of ± 1.96 , which rules out the null hypothesis. Therefore, there is a clear distinction between how male and female PSTs perceive the given statement.

Selection of Professional Learning Type

Table 1.13: *Perceptions regarding professional learning type selection.*

| Gender | SD | D | UD | A | SA | Total | Mean.Rank |
|--------|------------|-----------|---------|---------|---------|-------|-----------|
| Female | 114 76% | 36 24% | 0 0% | 0 0% | 0 0% | 150 | 139.52 |
| Male | 93 62% | 53 35% | 0 0% | 4 3% | 0 0% | 150 | 161.48 |
| Total | 207 69% | 89 30% | 0 0% | 4 1% | 0 0% | 300 | |

Z value = -2.729

No PST participant, male or female, strongly agreed with statement 13 (see Table 13). Of the total PSTs who took part in the study, 30% (24% females and 35% males) disagreed with the statement. In a similar vein, 69% of all PSTs (76% of whom were female and 62% of whom were male) who took part in the study strongly disagreed with the assertion. The null hypothesis is rejected because $Z = -2.729$ does not lie within the critical value of ± 1.96 . Hence, there is a big difference between how male and female PSTs interpret the given statement.

Traditional Training Hours

Table 1.14 depicts PSTs perceptions of traditional training hours

| Gender | SD | D | UD | A | SA | Total | Mean.Rank |
|--------|---------|---------|---------|------------|------------|-------|-----------|
| Female | 0 0% | 0 0% | 0 0% | 91 61% | 59 39% | 150 | 130.93 |
| Male | 0 0% | 8 5% | 0 0% | 39 26% | 103 69% | 150 | 170.07 |
| Total | 0 0% | 8 3% | 0 0% | 130 43% | 162 54% | 300 | |

Z Value = -4.480

The statement that due to trainings organized by the department, students have to faced learning loss just because teachers attend trainings during teaching hours was strongly agreed upon by 39% of female PSTs and 69% of male PSTs, according to Table 14. In the meantime, 26% of PST men and 61% of PST women agreed. 0% of all respondents either strongly disagreed or were unsure about the statement. The null hypothesis is disproved because $Z = -4.480$ is less than the ± 1.96 critical value. As a result, there is a big difference between how male and female PSTs interpret the given statement.

Administration Support and Feedback

Table 1.15: *Perceptions of administration support and feedback on self-directed PL.*

| Gender | SD | D | UD | A | SA | Total | Mean.Rank |
|--------|---------|-----------|---------|--------------|-----------|-------|-----------|
| Female | 0 0% | 0 0% | 0 0% | 66 44% | 84 56% | 150 | 188.22 |
| Male | 0 0% | 1 0.6% | 0 0% | 140 93.3% | 9 6% | 150 | 112.78 |
| Total | 0 0% | 1 0.3% | 0 0% | 206 68.6% | 93 31% | 300 | |

Z Value= -9.367

In accordance with the aforementioned table, 31% of all respondents (56% of whom were female and 6% were male) strongly agreed with the stated opinion. Similarly, the given statement was supported by 68.6% of respondents overall (44% of female participants and 93.3% of male participants). The null hypothesis is rejected because $Z = -9.367$ is less than the critical value of ± 1.96 . As a result, there is a big difference between how male and female PSTs interpret the given statement.

Preference of Training Type

Table 1.16: *Perceptions of training type preferences.*

| Gender | SD | D | UD | A | SA | Total | Mean.Rank |
|--------|-----------|------------|---------|-----------|---------|-------|-----------|
| Female | 59 39% | 69 46% | 0 0% | 22 15% | 0 0% | 150 | 130.18 |
| Male | 0 0% | 144 96% | 0 0% | 6 4% | 0 0% | 150 | 170.82 |
| Total | 59 20% | 213 71% | 0 0% | 28 9% | 0 0% | 300 | |

Z Value= -5.097

The study's male and female PST participants did not rate the given statement as uncertain or strongly agreed, as shown in the table above. The statement was agreed upon by 9% of the participants (15% female PSTs and 4% male PSTs). The study found that 46% of females and 96% of males agreed with the given statement. Meanwhile, 39% of the respondents who were female strongly disagreed with the assertion. The value of $Z = -5.097$ is outside the critical range. As a result, the null hypothesis is disproved, and it is concluded that male and female PSTs perceive the given statement differently in a significant way.

Training Duration

Table 1.17: *Perceptions of training duration/period.*

| Gender | SD | D | UD | A | SA | Total | Mean.Rank |
|--------|---------|---------|---------|------------|------------|-------|-----------|
| Female | 0 0% | 0 0% | 0 0% | 47 31% | 103 69% | 150 | 157.50 |
| Male | 0 0% | 0 0% | 0 0% | 61 41% | 89 59% | 150 | 143.50 |
| Total | 0 0% | 0 0% | 0 0% | 108 36% | 192 64% | 300 | |

Z Value= -1.681

As per the data mentioned in table 1.17, 64% of the total sample strongly agreed with the statement that a one-day professional workshop is preferable to continuous professional learning programmes throughout the year (69% of female PSTs and 59% of male PSTs). In a similar vein, statement no. 17 received the support of 36% among all PSTs (31% female and 41% male). The critical range is encompassed by the value $Z = -1.681$. The null hypothesis is therefore accepted, and it is stated that there is no discernible difference in perception of the given statement among both male and female PSTs.

Discussion

A strong and effective way which supports and make sure that a teacher in continuous growth while teaching, is professional development (Buenaflor, 2009; Campbell, 2017). In professional learning sessions, teachers require a variety of learner activities. Teachers in such programmes learn innovative ideas that can be used in the classroom to improve their teaching and learning practices (Buenaflor, 2009). However, self-directed professional learning (SDPL) is something else where the teachers are

motivated and inspired enough to work for their professional learning themselves, without any external support or influence. In current study, the primary school teachers' gender-based perceptions regarding the multiple aspects of the SDPL was explored. According to the Z value that was -0.266 (within threshold rang 1.96), no significant difference in perception of male and female Primary school teachers was determined regarding their ability of planning and setting the goals of their own learning. The opinions of the participants regarding the best way to learn independently varied significantly. Additionally, the Z-score of -3.838 did not fall within the range of 1.96, implying a significant distinction in responses between the study's male and female participants regarding their abilities to choose their own learning strategies.

There was a significant difference in responses from female and male study participants when it came to their ability to choose learning goals without the need for professional development. The majority of the sample agreed that learning from a master trainer is less effective than learning from a colleague. Campbell (2017) shared the same thought that learning from the people around you, your colleague, is more effective as both of you are on same page, having common issues, common experiences and equal level of understanding too. The perceptions of male and female PSTs regarding regularly evaluating students' performance to enhance their professional learning were found to differ significantly among the male and female teachers. Majority agreed that they should watch how their colleagues teach. However, there was no discernible difference between male and female PSTs' opinions of the value of observing other teachers' instructional strategies when necessary. A large majority of respondents from both genders concur that assessing students' performance makes it simple for them to pinpoint areas that need improvement. Additionally they knows how to fix or strengthen these teaching flaws. Beach (2017) also have the same claims as per the study findings that continuous monitoring and assessing students' performance let the teachers assess their teaching indirectly.

The Z value of -3.241 showed that there was a significant difference in PSTs perception regarding how SDPL encourages to reflect on the teaching. The majority of respondents firmly agreed that teacher autonomy in professional development directly impacts student learning. This finding is akin to the findings of Didion (2020) that teachers' professional development is ultimately the students' development. $Z = -5.121$ shows a significant difference between participants' perceptions of how self-directed professional development for teachers affects students' learning. The ultimate objective and outcome of professional learning activities, according to Boroko (2004), Desimoni (2011), and Mizell (2010), is the professional growth of teachers, which results in better learning outcomes and experiences for students. These results are in line with the findings of the current study, which discovered that professional learning of teachers significantly affects student learning. Data analysis showed a significant difference between how female and male PSTs perceived the requirement that free time be made available during class hours in order to enhance capacity-building abilities.

There was a noticeable difference between the study's selection of male and female PSTs in terms of their refusal to attend the necessary professional training workshops. A significant difference in respondents' opinions was found which says that the departmental trainings are causing students' learning to suffer because teachers attend training during school hours. However, the administration supports for teachers' self-directed learning needs was supported by a large number of male and female PSTs. These findings supported the claims of Broad and Evans (2006), Collins et al. (2017), Lopes and Cunha (2017) that continuous support is required to sustain learning outcomes in the classroom. By providing resources and support, such as facilities, budget allocation, qualified personnel, and learning resources, effective professional learning allows teachers to constantly grow. These findings are in line with the current study's conclusion that the management must provide appropriate support for professional learning promotion.

Conclusion

It is concluded that in the context of self-directed professional learning there are no appreciable differences between male and female PSTs in their perceptions of planning and establishing learning objectives, duration of the long-term professional development program and day-to-day professional learning, ability of planning and setting the goals of their own learning, and observing other teacher's instructional techniques. However, male and female PSTs have different perspectives on some aspects of self-directed professional learning, such as selecting study strategies, learning

methodologies, and learning responsibility, evaluation of student performance, the ability to spot and address problematic teaching areas, time allocation, and perception regarding administrative support, and reflection of self-directed professional learning on teaching.

Recommendations

Based on the conclusion, it is recommended that the teachers prefer to learn from their peers, so peer coaching should always be considered and promoted by the department. When the administration offers one-day or on-going training sessions for teachers, it must give teachers' preferences top priority. As any professional learning program's success depends on how teachers feel about it. Based on the study's findings, it is also recommended that administration need to support the idea of self-directed professional learning so that teachers can complete their own training. To help teachers understand the idea of self-training, various seminars and workshops should be organised. Administration, for instance, heads of schools should constantly encourage their teachers to learn through sharing experiences with their peers. Last but not least, workload of teachers within school should be reduced so that all teachers can have free time during school hours and pursue their own independent professional development more effectively and efficiently.

References

- Beach, P. (2017). Self-directed online learning: A theoretical model for understanding elementary teachers' online learning experiences. *Teaching and Teacher Education*, 61, 60-72
- Bradley, M., Kallick, B., & Regan, H. (1991). *The staff development manager: A guide to professional growth*. Needham Heights, MA: Allyn and Bacon.
- Brock, B., & Grady, M. (2007). *From firstyear to first rate: Principals guiding beginning teachers*. Thousand Oaks, CA: Corwin Press.
- Buenafior, J. (2009). Teachers are students, too. *Momentum*, 40, 24-2
- Campbell, C., Osmond-Johnson, P., Faubert, B., Zeichner, K., & Hobbs-Johnson, A. (with Brown, S., ... & Steffensen, K.). (2017). The state of educators' professional learning in Canada: Final research report. Retrieved from <https://learningforward.org/docs/default-source/pdf/learning-forward-report-the-state-of-educators-professional-learning-in-canada.pdf>
- Cogshall, J. G., Rasmussen, C., Colton, A., Milton, J., & Jacques, C. (2012). *Generating teaching effectiveness: The role of job-embedded professional learning in teacher evaluation*. Washington, DC: National Comprehensive Center for Teacher Quality.
- Danielson, C. (2006). *Teacher leadership that strengthens professional practice*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Didion, L., Toste, J. R., & Filderman, M. J. (2020). Teacher professional development and student reading achievement: A meta-analytic review of the effects. *Journal of Research on Educational Effectiveness*, 13(1), 29–66.
- Garrison, D. R. (1997). Self-directed learning: Toward a comprehensive model. *Adult Education Quarterly*, 48(1), 18-33
- Guskey, T. (2002). Professional development and teacher change. [Electronic version]. Retrieved from June 24, 2021, from <http://physics.gmu/~hgeller/TeacherWorkshop/Guskey2002.pdf>
- Kennedy M. M. (2016). How does professional development improve teaching? *Review of Educational Research*, 86, 945–980.
- Knowles, M. (1975). *Self-directed learning: A guide for learners and teachers*. New York, NY: The Adult Education Co
- Lambert, M., Wallach, C., & Ramsey, B. (2007). The other 3 R's. *National Staff Development Council*, 4, 36-40.
- Lopes, J. B., & Cunha, A. E. (2017). Self-directed professional development to improve effective teaching: Key points for a model. *Teaching and Teacher Education*, 68, 262–274.
- Mushayikwa, E., & Lubben, F. (2009). Self-directed professional development—Hope for teachers working in deprived environments? *Teaching and Teacher Education*, 25(3), 375-382.
- Randi, J., & Zeichner, K. M. (2005). New visions of teacher professional development. *Yearbook of the National Society for the Study of Education*, 103(1), 180–227.
- Richardson, V. (2003). The dilemmas of professional development. *Phi Delta Kappan*, 401-406.
- Slavit, D., & Roth McDuffie, A. (2013). Self-directed teacher learning in collaborative contexts. *School Science and Mathematics*, 113(2)

- Timperley, H, Wilson, A, Barrar, H and Fung, I (2008) Teacher Professional Learning and Development.
- Webster-Wright, A. (2009). Reframing professional development through understanding authentic professional learning. *Review of Educational Research*, 79(2), 702–739
- Zeichner, K. M. (2003). Teacher research as professional development for P–12 educators in the USA. *Educational Action Research*, 11(2), 301-326.