Impact of Teacher Professional Development on Student Learning at Secondary Level

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Abstract:
In this paper we discuss about a study on impact of teacher professional development on student learning at secondary level. In a world where teachers are required to become ‘high-level knowledge workers’, the emergence of the school as learning organization is vital. In this context, the aim of this systematic review was to explore what comprises effective professional development for educators: i.e. what forms of teacher professional development definitively lead to positive outcomes for students? The NEP-2020 provides for a comprehensive, sustainable and reformative roadmap for a paradigm shift in the entire education system in the country, and is culturally grounded, is geared toward quality transformation, and is internationally competitive. Teacher professional development involves a continuous process of reflection, learning and further a teacher’s knowledge and skills, leading to enhanced teaching practices that positively impact on student’s learning. A teacher training programme provides teachers with skills and current pedagogy practices to help them connect with, manage, and educate their students in a way that ensures all students are learning and benefiting. A teacher professional development provides teachers with technical help to educate them and further train them in specialized areas. It also provides them with an in-depth understanding of how teacher training affects student learning. When executed properly and with the appropriate material, teacher development programmes have the potential to develop teachers to the point where they can favorably affect students not just academically but also socially. Education is the cornerstone of societal development, and at the heart of education is the teacher-student dynamic. The role of teachers extends far beyond imparting knowledge; they shape young minds, inspire curiosity, and foster a love for learning. Teachers are an important element of the education system and play an important role in the effective development and implementation of educational policies. Teacher training is not a one-time event; it is an ongoing process that encourages continuous professional development. Educators who engage in regular training sessions stay abreast of the latest educational research, methodologies, and best practices. This commitment to lifelong learning ensures that teachers remain effective and adaptable throughout their careers, positively impacting student outcomes. Teachers may have a significant influence on students and push them to stay on track during their formative years. Students who see their teachers as role models achieve extraordinary results.

Keywords: Professional Development, CPD (Continuous Professional Development), Student Learning.

Introduction: Teacher professional development involves a continuous process of reflection, learning and action to further a teacher's knowledge and skills, leading to enhanced teaching practices that
positively impact on students' learning. Professional development for teachers consists of self-directed or directed programs and activities designed to enhance their knowledge, skills, and expertise in their teaching practice. Continuous Professional Development helps teachers keep up with the latest developments in their field. It means they can provide more engaging lessons relevant to today's students. It also allows them to develop new skills and techniques that will help them become better educators overall. The ongoing professional development of teachers is fundamentally important for education quality, and has been shown to improve teacher satisfaction and retention. Professional development is gaining new skills through continuing education and career training after entering the workforce. It can include taking classes or workshops, attending professional or industry conferences, or earning a certificate to expand your knowledge in your chosen field. They are an important source of motivation for students throughout their academic careers, assisting them in achieving short- and long-term goals with the right supervision and guidance. Teachers help students realize their actual potential and construct a bright future by connecting them to all the knowledge that exists out there.

The impact of teacher professional development on student learning is multifaceted and far-reaching. Further ahead, the various teacher professional development components and their impact on student learning

1. **Instructional Quality**: A primary impact of teacher professional development is the enhancement of instructional quality. Well-trained teachers are adept at employing various teaching strategies, differentiating instruction based on student needs, and effectively managing classrooms. They can understandably present complex concepts, use engaging teaching aids, and create lessons that cater to different learning styles. Enhanced instructional quality inevitably leads to improved student understanding and, consequently, better academic performance.

2. **Pedagogical Skills**: Teacher training programs are designed to equip teachers with the latest pedagogical methods and strategies. These programs provide teachers with tools to create dynamic and engaging learning environments. From incorporating technology in the classroom to employing interactive teaching methods, trained teachers are better equipped to adapt to the evolving needs of students. The use of diverse teaching techniques not only caters to different learning styles but also fosters a more inclusive educational experience.

3. **Individualized Instruction**: Teacher training emphasizes the importance of recognizing and accommodating individual differences among students. A trained teacher is more likely to implement personalized instruction, tailoring their approach to meet the unique needs of each student. This individualized attention can be particularly beneficial for students with diverse learning styles or special educational needs, fostering a more inclusive and supportive learning environment.

4. **Integration of Technology**: Teacher professional development programs often focus on familiarizing teachers with the latest educational technologies and methodologies. Teachers who undergo such training are better equipped to integrate digital tools into their lessons. In today’s digital age, the integration of technology in education is crucial to make learning more interactive and relevant to students and prepare students for the challenges of the future.

5. **Teacher Confidence**: Teacher professional development also significantly impacts teacher confidence. As teachers acquire new skills and knowledge, they become more assured in their teaching capabilities. This confidence enables them to handle diverse classroom situations effectively, innovate with teaching methods, and create a positive learning environment. A confident teacher is more likely to inspire confidence in students, promoting a culture of learning and curiosity.
6. **Classroom Management:** Effective classroom management is another area where teacher training has a profound impact. Teachers who undergo proper training can manage classrooms more effectively, ensuring that the class runs smoothly, students are engaged, and disruptions are minimized. Effective classroom management creates a nurturing and structured environment that is conducive to learning. One of the key aspects of teacher training is developing effective classroom management skills. A well-managed classroom sets the stage for effective learning. Trained teachers are adept at creating a positive and structured environment that encourages student participation and collaboration. By managing time efficiently, addressing behavioral issues, and creating a sense of order, teachers can optimize the learning experience for their students.

7. **Student Engagement:** Teacher professional development helps teachers learn how to effectively engage students in learning. Trained teachers can design interactive and interesting lessons, use technology effectively, and connect learning to real-world contexts. These strategies increase student engagement, making learning more enjoyable and meaningful for students.

8. **Student Motivation:** Teacher professional development can employ strategies to cultivate intrinsic motivation, fostering a love for learning. They can provide constructive feedback, recognize student efforts, and create a supportive environment that encourages students to take risks and strive for improvement. Quality teaching, fueled by effective teacher training, can significantly boost student motivation. Increased motivation leads to greater student effort and enhanced academic outcomes.

9. **Positive Teacher-Student Relationships:** Teacher professional development also emphasizes the importance of building positive and supportive relationships with students. A teacher who understands the social and emotional needs of their students can create a safe and nurturing learning environment. This emotional connection fosters trust, encourages open communication, and enhances student motivation and engagement.

10. **Growth Mindset:** Teacher professional development often includes strategies for fostering a growth mindset in students. Teachers who instill the belief that intelligence and abilities can be developed through effort and perseverance contributes to a positive learning culture. Students with a growth mindset are more likely to embrace challenges, learn from mistakes, and persist in the face of difficulties.

**Dimensions of Teacher Professional Development:** Teacher professional development is not just an investment in teachers; it is an investment in the future of students. It directly influences instructional quality, teacher confidence, classroom management, student engagement, motivation, and achievement. As such, teacher training should be prioritized in education policies and practices. Continuous professional development opportunities should be provided to teachers to ensure they are equipped with the latest skills, knowledge, and strategies to facilitate effective learning. Teachers often use a combination of both teacher-centered and learner-centered methods to create a balanced and effective learning environment. The teacher takes a more authoritative role in the classroom, delivering lectures, providing information, and directing the learning process. Examples of teacher-centered methods include the lecture method, where the teacher imparts knowledge through spoken presentations, and the demonstration method, where the teacher shows how to perform a task or solve a problem. Learners take an active role in constructing their knowledge and understanding. Examples of learner-centered methods include group discussions, problem-solving activities, project-based learning, and inquiry-based learning. These methods encourage critical thinking, collaboration, and independent learning skills.
• Pedagogic Competency.
• Personal Competency.
• Professional Competency.
• Social Competency.

What does teacher Professional Development (PD) mean?
Teacher Professional development is gaining new skills through continuing education and career training after entering the workforce. It can include taking classes or workshops, attending professional or industry conferences, or earning a certificate to expand knowledge in their field. Teachers themselves acknowledge the significance of continual PD for effective teaching and student achievement. A study highlights the consensus among educators on the importance of ongoing professional learning and its direct impact on the quality of education provided to students.

Integrating sustainability and equity into PD programs is crucial. It ensures that teachers are not just subject matter experts but also advocates for a more just and sustainable world. By equipping teachers with the resources and knowledge to address these global issues in the classroom, we lay the groundwork for a generation of students who are informed, empathetic, and empowered to make a difference.

• Teacher PD aims to improve teachers and their practice by adopting a holistic approach to developing the teacher as a professional practitioner. It is an ongoing process that supports continuous development of practice throughout the whole of a teacher’s career.
• Teaching practice comprises a range of areas, each of which can be targeted by PD activities. For example, in the TPACK model (Mishra and Koehler, 2006) three overlapping areas exist – Technological, Pedagogical and Content Knowledge. PD activities could therefore specifically target subject content knowledge or instead focus on subject-specific pedagogical knowledge (the overlapping areas of Pedagogical and Content Knowledge).
• Any activity that supports teachers to reflect, learn and then act to improve their practice can be classed as teacher PD, and such activities can occur in a face-to-face or online environment. Some examples are given in Figure 1.
• Teachers can engage in PD activities at the micro (individual) or macro level (collaborating with teachers across a range of contexts; Figure 1).

Figure 1: Micro to macro scale engagement with PD activities
What other terms are associated with teacher PD?
Effective teacher professional development not only improves instructional practices but also cultivates a sense of motivation and confidence among educators. When teachers are given opportunities to enhance their skills and acquire new knowledge, they feel valued and empowered. This sense of professional growth translates into increased job satisfaction, as teachers become more confident in their ability to positively impact their students’ learning journeys. Other terms commonly associated with teacher PD includes:

- Continuing professional development (CPD) reinforces the notion that professionals should always develop their expertise and teaching practice.
- Teacher (or professional) education emphasizes how engagement in educational experiences leads to learning, advancing a teacher’s knowledge, skills and characteristics and enhancing their practice.
- Training often develops operational features of a role, focusing on accomplishing one specific skill, such as understanding how to teach a syllabus or how to write learning objectives.
- Mentoring and coaching are slightly different from one another. Mentoring focuses on establishing a supportive relationship where a less experienced teacher benefits from the guidance of a more experienced colleague (a ‘critical friend’).
- Coaching is a technique that provides structured support to encourage a practitioner to review and develop their practice in relation to a specific skill or change in circumstance.
- A professional learning community/network brings practitioners together, enabling the sharing of ideas and experiences, as well as providing mutual support, either online or face to face.
- In action research teachers conduct research into their own practice with the aim of finding out how they might overcome a specific issue or problem associated with their practice.

What are the benefits of teacher PD?
Teacher professional development is a cornerstone in the shift toward student-centered learning. When teachers are trained to focus on the individual needs, strengths, and interests of their students, the learning experience becomes more personalized and meaningful. Professional development programs that emphasize differentiated instruction, project-based learning, and technology integration empower teachers to create learning opportunities that resonate with diverse learners.

- Improved learner outcomes: Numerous research studies highlight the vital role that teachers play in securing learner outcomes (e.g. Creamers and Kyriakides, 2013; Hattie 2012). Teacher PD that is
explicitly focused on improving learner outcomes has a significant impact on learner achievement (Cordingley, 2015). Therefore, by enhancing teachers’ practice through effective PD opportunities, learner achievement will also improve.

- Increased teacher motivation: PD activities that provide teachers with a sense of agency and control over their professional development foster intrinsic motivation in teachers (Coe, 1998). Teachers also express higher job satisfaction when they have autonomy over their own PD (Worth and Van den Brande, 2020).

- Benefits for schools and the sector: When teachers engage in PD activity, individual schools and the school sector overall can benefit through:
  1. The retention of teachers in the profession (Worth and Van den Brande, 2020).
  2. An elevation of a school’s reputation for effectively supporting learning as learner progress accelerates and outcomes improve.
  3. Enhancing a school’s reputation as a place where staff are valued and supported to develop as professionals.

**Conclusion:**

It could be reiterated that this study focused on the impact of PD on students’ performance. This study is very crucial in the sense that PD is an undying subject matter that constantly needs researchers’ attention. The study concluded that there is a positive co-relational effect between teacher professional development and students’ performance in all the levels of schooling without restrictions; that PD improves teachers’ research abilities and instructional methodology and that teachers’ level of familiarity and interest in PD programs and their participation have significantly improved students’ grade and heightened their interest in teachers’ subject. The impact of teacher PD on student success is well-documented. Professional development empowers teachers with innovative teaching strategies, up-to-date content knowledge, and refined classroom management skills. These enhancements in teaching directly correlate with improved student performance, increased engagement, and a more positive learning environment. Research underscores the notion that when teachers are well-trained and supported through ongoing PD, there is a tangible improvement in academic achievement. Students benefit from a more enriched educational experience that not only boosts their test scores but also cultivates their critical thinking and problem-solving abilities, skills imperative for navigating a sustainable future.

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