

## Chapter 5: Teacher Professional Development Programs and Evaluation in the United States

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**Abstract:** Education systems globally are undergoing deeper reforms across various nations. There is a universal agreement among scholars, educators, and policymakers agree that for these reforms to be successful professional development is critical. Governments around the world have therefore invested a significant amount of money on the continuous learning of teachers. Research conducted in the past and literature that is available has indicated that professional development given to these teachers has minimal effect on various teaching practices for the students learning. The paper describes professional development programs and the evaluation of teachers in the United States. It additionally provides the features of the current professional development programs and their effectiveness. Since the continuous learning of the teachers is a high priority to the United States, they have built a robust infrastructure that supports high-quality professional development to address the interest of teachers and meet their needs. The paper finally discusses the monitoring and evaluation of both these programs and the general teacher's performance.

### 1 Introduction

The world is increasingly becoming globalized, and countries have become subject to massive political, technological, and economic changes. The education sector is also under significant transformation, just like the other sectors because of the globalization effect (Bautista & Ortega-Ruiz, 2015, p. 241). Unfortunately, it has not always been analyzed by similar criteria that ensure high-quality results. In the past, policies have prevailed over scientific proof in deciding the actions that most nations take in the education sector. The paper focusses on a country that has continuously transformed its system in a bid to meet the 21<sup>st</sup> century needs of its students and teachers.

To be a teacher or educator means having a constant learning experience. Ranging from teaching a new concept and alternative methods to specific subjects and a need to continuously adapt to new - environments and new student abilities mean that a teacher's role is consistently in flux. In the information era, technology plays a significant role in the daily lives of students, which means that there is a vast range of opportunities in engaging these students in classrooms using the technology (Bautista & Ortega-Ruiz, 2015, p. 241). However, that also means teachers must not only adapt but have the necessary skills to implement the new issues effectively. Organizations that believe in effectiveness place premium in talent acquisition, development, maintenance, or advancement of its workforce (US Department of Education, n.d). It lies with the education stakeholders to ensure that teachers have the necessary skills yet States and school districts have approached continuously teaching from a one size fits all perspective which negatively impacts an efficient and productive education sector workforce. To ensure the teaching workforce is efficient and productive individual talents and careers must be carefully managed.

In justifying the investment made on education by state, district, and schools, there must be an improved performance, which is only possible when teachers are well prepared. In the education sector, return in investment takes different forms, including improved teacher performance and highly performing teacher retention rates. Therefore, programs considered innovative are designed in such a way that they assist in achieving long-term advancement in the

productivity of education. These programs include interventions that focus on teacher training models while utilizing student's outcomes to review, refine, and improve this training. The programs range from residencies, non-residencies like day by day workshops that offer a range of activities, including rigorous clinical experiences. Besides the teacher preparation programs, the federal government provides almost half of its federal funds under Title II part A (US Department of Education, n.d.). There are other funding running into billions of dollars towards professional development programs targeting teachers and school leaders across the United States.

## **2 Literature review**

One of the most significant reforms that have been introduced in the US education system are changes related to the nature and types of outcomes in learning outcomes that are expected from the students. Learning today is more ambitious than it was before, and the results are not only academic but also non-academic (US Department of Education, n.d.). The system is curated based on a belief that learning today is not just to deliver the knowledge on the subject like science, mathematics, and language or prepare learners for their professional careers. But also to ensure that they are active, confident, self-directed as wellbeing emotionally, socially, technologically, and cognitively competent. Education today has extended to teach students the value of making responsible choices by equipping them with 21<sup>st</sup>-century skills and competencies and be able to communicate and collaborate while being aware of the cross-cultural and global matter. The other meaningful reform in the country is directly related to the promotion of social justice and equity in schools and tame historical injustices based on racial, ethnic, and class inequalities. Schools are expected to act effectively and equitably to all learners despite the diversity factor and ensure that they come out of the classrooms into the society as transformative and just citizens.

These transformations are rooted in changes in the instructional practices, teaching models, and curriculum in general. At the center of these reforms are teachers who ensure that they are successfully implemented. Teachers play several roles in a school setup, which requires them to possess a wide range of both personal and professional competencies (DeMonte, 2013). They must be able to provide every student with deeper and meaningful learning hence ensuring a holistic development process. Additionally, teachers also must collaborate with fellow teachers and parents to deliver the best learning outcomes. As such, they continually need opportunities to learn more both out and in school. Teachers also need to have specific values to act as leaders of social change in society. The social changes include adopting orientations towards social justice and helping their students to recognize and eliminate patterns that lead to oppression and injustice. Therefore, to guarantee the success of education sector reforms, teachers must be appropriately equipped with appropriate skills and competencies necessary for their professional practices. Additionally, leadership, collaboration, as well as the virtue of integrity, are critical to the success of the reforms.

Imants & Veen (2010) argue that the teachers play a critical role in the learning of students, and professional development given to teachers is based on the assumption that it is for the good of the profession as well as student performance. These two rationales differ as the first one has a premise that teachers have individual inadequacies that continuously need repair. The second rationale is based on the assumption that the learning of a teacher leads to practitioner fulfillment and supports the teaching of students. Review of the current programs gives an insight that despite the increasing number of professional development programs, those carried at

the workplace or school setting have significantly increased compared to those taken off-site. The latter include seminars, conferences, workshops, and lectures as well as training programs that last a short duration and cover specific topics and issues.

The programs are designed in such a way that the conditions and elements help in enhancing their effectiveness. Such features include connecting with the context of the work of a teacher while the design is in such a way that the program is offered for longer durations; the training is subject matter centered and puts more emphasis on its analysis and reflection by participants. These elements, designs, and conditions that improve the effectiveness of the programs are what have necessitated the recent onsite development methods (Darling-Hammond, Hyler & Gardner, 2017). On-site involves training in a local context as well as training within the communities. They are additionally building professional communities for collaboration purposes, inquiry groups, and study circles. Onsite professional development programs have transitioned the sector previously focusing on an individualized approach to teaching skills, knowledge, and competencies on teaching to a new method focusing on instructional form with a more focus on a teacher's specific challenges and student learning problems (DeMonte, 2013). Other changes include single sessions with short topical issues to longer-term and ongoing sessions. The new on-site model also has focused on changing the passive participation of teachers to an active learning process within the education system.

For several years research has questioned the effectiveness of teacher development programs across America and the world at large. These researchers also found that the learning of teachers was promoted by focusing on teaching knowledge, instructional practices, and the thinking of students. No matter the approach is taken, effectiveness was independent of methodology and more dependent on which elements were being changed. That is because some of the knowledge elements are much easier to change compared to others. However, research by Imants & Veen (2010) found that when onsite and off-site activities were combined in a single professional development program, it was more effective.

Several methods have been developed in the past to accelerate teacher learning. These methods include supervision, mentorship, coaching, action research, and collegial consultation, among others. The plans have been applied in teacher development programs alongside teacher evaluation methods on the teacher's competencies. One consistent problem that has stayed despite the changes are the gaps that exist between theory and practice. The main aim of the development program method is to help in bridging the gap (Darling-Hammond et al. 2017). The gap is because there is a variation in the espoused theory which talks about codified professional knowledge gained at the University during teacher training and theory in use, which is more about the tacit knowledge by the teacher. The methods used in the past have been insufficient and cannot create a link between the theory in use and espoused theory because the relationship that exists between these theories is deeply rooted in the philosophical theory of knowledge and politics.

But even with the increasing research and knowledge about the professional development programs, how the knowledge gained during the programs, and how it improves their practice is limited. The limitations continue to present a considerable problem to researchers, teaching practices, and policies in the sector. However, the problems do not make the objectives of the programs unreasonable.

### 3 Methodology

The research will involve several research steps. The first step involved articulation of parameters in helping in identifying various potential previous studies as well as government websites containing related information. The first parameter used was the focus of the studies to be used for the review. Only studies and resources that described Professional development for teachers were considered. Also, resources focusing on evaluation and evaluation models were considered for this review. The length of each research article was not considered as long as it contained the programs within them. Therefore, results returned included all the teacher learning as well as programs that teachers considered provided professional development experiences outside the classroom or formal programs.

The second parameter used in the study involved filtering research articles that mainly focused on teachers who were practicing. The studies selected under this parameter involved programs that were completely distinct from the initial education received by the teachers in the University. The last parameter used to select articles for this review involved studies and resources that focused on teachers in the United States. The parameter was used because the objective of the evaluation was mainly targeting the US as the geographical setting. To get these study articles, we searched for several education and education journals as well as the United States various Education departments. We also searched for various Professional development program websites, mainly based in the United States. Keywords included Teacher development programs, United States, Teacher workshops, Department of Education, Professional Development, Evaluation models, the effectiveness of evaluation criteria.

Web search on "peer-reviewed research" articles on "Teacher Professional Development Programs" in the "united states" yielded 1,880 results. Those on the journal sorted from this returned 200 potential articles. Among these articles, the remaining keywords were used to filter them further to 10 articles. The abstracts were read to assess if they met the rationale of the review. Those articles that had an unclear connection to PDP were removed. The studies were then examined, and resolution drew. It is also important to note that during selection for inclusion, some articles were retrieved from research conducted around the world to inform theoretical perspectives behind Professional development programs. Three articles and one website were considered for this research.

### Findings

Among the reviewed websites, journals, and resources, the research article found out that:

1. Professional development programs grew significantly across America during the early 1990s
2. Some programs are successful and effective, while others have been less effective due to the variation in implementation and components of the program.
3. Major Successful programs included
  - Reading recovery program
  - The Science Teacher Learn from Lesson Analysis (STeLLA); and
  - State Teacher Professional Development Programs- Under these programs the study will discuss Reading Apprenticeship for California based biology teachers
4. Typical components of these programs include collaboration, mentorship, and coaching, follow-up sessions, and subject matter course works.

Additionally, there are various teacher evaluation programs across the United States, mainly implemented at state and district levels.

#### **4 Discussion**

Over the years, the development of teachers has become a more centralized issue. During the early 1990s, the country experienced significant growth of University language centers and National Language centers, which provided a research-based focus and dynamism on teaching and learning of languages. Bernhardt and Tedick state that in the US, intensive workshop opportunities for teachers were provided by a network of foreign language centers. These centers also offered both curriculum and material development across the country. In the neighboring country, Canada, bilingual language policy was fostered by the modern language centers and also provided an opportunity for research on different models for instruction for bilingualism.

#### **Significant professional development programs in the US**

##### *Reading Recovery*

Reading recovery is one of many professional development models that have been implemented in the United States with success. Besides demonstrating effectiveness in the United States, it also has been implemented in other developed countries, including the UK, Canada, and New Zealand, among other countries (Hammond et al. 2017, p. 5). The effectiveness has been evident from the learning gains that students taught by teachers under the program have shown. Historically literature reviewed shows that the intervention was provided to individual readers who were struggling.

In the United States, implementation began in early 1984 and grew to serve more than 152 thousand students. The program expanded after the federal funding in 2010 and included Ohio University among other 19 universities across the US. These universities recruited and trained teachers and their respective schools to participate in the program. The grant supported more than 3,747 teachers who taught one on one lessons to 387,450 students (Hammond et al. 2017, p. 5). The experiences also included small group instructions and Classroom teaching. According to the Reading recovery theory, Teachers were charged with the responsibility of critically identifying the needs and strengths of students then facilitate their learning by appropriate provision of opportunities that would ensure they acquired new skills.

There is a general agreement by most researchers that the teaching practice is grounded in a substantial knowledge base and appropriately sophisticated teaching skills. Similarly, the researchers agree that the advanced model applies to the individual student's needs; thus, the professional development program must be informed by an approach that focuses on Knowledge acquisition per the individual teacher's requirements. Therefore, the Reading recovery in the United States requires teachers in groups of 8 to 12 to undergo a year-long graduate training under the instructions of a literacy coach (Hammond et al. 2017, p. 5). The components of this program include practical teaching technique demonstrations, model lesson observations, and collaborative discussions among the teacher participants. Additionally, the course completion is followed by teacher support from the University within their classrooms as well as implementation facilitation. They receive additional ongoing professional development guidance, including a session with a reading recovery teacher leader, which runs for at least six weeks. These sessions ensure that they have the opportunity to collaborate and interact with colleagues and school leaders. They also have ongoing access to training institutes and conferences.

An evaluation was conducted for the federally funded initiatives under this professional development program, which found that students participating in classes taught by teachers participating in the program showed a significant improvement compared to the students in the control group. The evaluation criteria included reading comprehension, decoding, as well as general reading. The gains were generally threefold larger than average gains within similar instructional interventions.

#### *The science teacher learn from lesson analysis (STeLLA)*

STeLLA is a professional development program in the US that mainly focusses on helping teachers in upper elementary schools in conducting science analysis and improve pedagogy. The program centers on science content and uses a video-based analysis teaching model (Hammond et al. 2017, p. 6). The program starts with a summer institute that runs for a three-week duration and focusses on science contents under the instructions of local university science faculty. Teachers in the program engage in a video analysis during the institute period, after which they have followed up sessions during the school year. The basis is for the teacher to use student centers thinking and science content through storyline lenses. That is to ensure that the program creates materials that are classroom-based and specific to the students.

The student thinking section of the program provides that teachers can understand the ideas that arise from students and use them in the planning and teaching of lessons. It also meant to help teachers anticipate the students' line of thinking, which will help them respond to the ideas that arise and avoid misunderstanding. The storyline section of the program focusses on the sequence that science ideas need to follow while linking them to students understanding and ensure coherence in stories so that they make sense of it (Hammond et al. 2017, p. 6). During the program period, teachers meet in small groups under a facilitator who leads the discussion on video cases of teaching, usually including a case study. The teachers then would practice through student-teacher turn-taking role interview. The teachers participating in the program would also meet for 58 hours during the school year and conduct analysis. From the study conducted by Roth et al., the teachers participating in the program outperformed those who only attended one section of the program. The study highlights the lack of connection with the classroom context for the teachers who did undergo the entire program.

Additionally, the study results show that the students under the teachers who attended the Stella program achieved better learning results compared to the control group. Statistical analysis of these results showed the difference between the teacher's ability to create a more wholesome a cohesive scientific illustration. The teachers on the program also showed higher content retention compared to content only teachers or teachers who held teaching practice certification without the program (Hammond et al. 2017, p. 7). The study, as well as related studies, therefore show that Professional development programs that focus mainly on content learning were less effective compared to those that linked content to teaching practice pedagogies. Also, the professional education of teachers, which are embedded in the job, are specific to the teaching context and are based on content were essential to addressing the needs of students.

#### *State teacher professional development programs- California*

Besides National teacher professional development programs, there are several state-level Education programs curated for teachers locally. One such program includes Reading Apprenticeship, mainly for California based high schools for Biology teachers (Hammond et al. 2017, p. 8). The program integrates academic literacy and biology instructions, which are

collaborative, subject focused, and inquiry-based. The program design is in such a way that it takes into account the conceptual understanding and content pedagogy of the teachers. The program sessions allow teachers to immerse themselves into simulated learning activities and environments that match the characteristics of a real student classroom.

Additionally, the teachers also analyze work from several students, case studies, and videotaped classrooms to understand and foster student expectations in the real teaching environment. The program reading logs and think aloud, which for part of metacognitive elements within the sessions. Lastly, the teachers practice classroom routines such as jigsaws, problem-solving and text-based discussions to help students build collaborative skills. The program had ten sessions running for 12 months with a five-day institute in the summer, follow-up days for the rest of the period (Hammond et al. 2017, p. 8). During the year-long period, teachers collaborate and exchange ideas and resources with moderation from a coach. Allen et al. analysis of this program show that the results for the teachers that participated had an increased reading growth in comparison to those in the control group. Additionally, the student's performance was better compared to the one assigned the control group.

### **Program evaluation**

In ensuring that there is a return on investment and that the programs are useful, it is critical to evaluate these programs using the Return as mentioned earlier on Investment criteria. The current evaluation practices across the country are not making a rigorous distinction between the lowest and the highest performing teacher instead. It has an available system against which overall performance is measured (US Department of Education). However, at the state level, some districts have to make a well-informed decision on these programs based on multiple evaluation criteria or evidence. The evidence includes student learning that helps in the identification of the best performing and most influential teacher for advancement against the least effective one who needs support and training for improvement. Therefore, implementing a rigorous evaluation model for the teacher represents long term investment in the education system by ensuring the workforce is more productive. Additionally, supporting, development, and adoption of new practices that match the 21<sup>st</sup> century needs are likely to improve student outcomes.

There have been new models developed to ensure that states have rigorous systems of evaluation. The United States Education department requires the assessment as part of the application process for grant competitions by the states (DeMonte, 2013). The evaluation process by the District of Columbia was revised to capture achievements by the students as well as classroom instruction observation to rate the teachers. Additionally, the system changed from a binary scale rating to a four-point rating system after the former was deemed ineffective. Other states like Georgia also revised their evaluation system for teachers and piloted the new system in 2012 (DeMonte, 2013). The system only allowed teachers classification to fall under Exemplary, ineffective, developing, or proficient categories.

The goals of evaluation systems are put in place to serve two purposes. The first is to gather information for the decision making like collecting data on teachers and then either promoting, demoting, or dismissing. The other function, which is perhaps the most important one, is to identify and specify the strength and weaknesses of teachers and assist in improving the teaching practice. The latter serves as a tool playing a critical role in enhancing the teaching and education quality.

Other state-run evaluation programs include a Tennessee state evaluation program that uses funds draw from Race to the Top program to develop an evaluation model that is directly linked to the performance of the students (US Department of Education, n.d). Delaware is also implementing an evaluation program funded by Race to the top funds to implement teacher performance evaluation procedures as well as recommendations by teacher workgroups. There are also district efforts geared towards evaluation and improving teaching practices while maintaining high student performance (US Department of Education, n.d). Pittsburgh, for example, in collaboration with Teacher federation, implements salary schedules and bonus pay that is directly linked to the evaluation program. It emphasizes on student performance and teacher performance by now using it as salary determinant.

## 5 Conclusions

Professional development is a critical strategy for ensuring that teachers and educators are well equipped to support student learning in the classrooms. Research shows that if implemented adequately with well-defined objectives and properly curated methodology, Professional development can significantly propel student performance up. However, the research reviewed indicates that these programs widely vary in implementation, design, and objectives because of the goals. This paper reviewed some of the successful professional development programs across the United States as well as the gains the students had as a result of their implementation. These programs had certain common elements ranging from content focus, teacher collaboration, coaching, and expert support, Sustained duration, and incorporated learning strategies. These elements were not implemented in isolation but combined with supporting teacher learning as well as increase their effectiveness. The combination created a culture of collaboration leading to a collective professional resource pool that leveraged on the widespread and productive improvement of the education sector. Besides incorporating the elements of effectiveness, they also paid attention to the needs of the teachers and students. Lastly, they also had regular evaluations which continually ensured improvement of the programs

The literature on teacher development also shows a range of learning views, designs, and opportunities, but the curriculum guiding development process in incoherent and fragmented. Also, the rationale behind teacher development varies considerably due to different contexts and needs. There are two primary rationales behind most teacher development programs, with the first arguing that the reforms being implemented need the teachers to learn. The rationale argues that teachers need advice and support to understand these reforms as well as how to work on them. The second rationale is that teachers are based on the nature of what teaching entails.

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