Chelonian Conservation And Biology





Vol. 18 No. 2 (2023) | https://www.acgpublishing.com/ | ISSN - 1071-8443 DOI: doi.org/10.18011/2023.12(2).1721.1733

EXPLORING THE IMPACT OF TEACHER PROFESSIONAL DEVELOPMENT ON TEACHERS' PERFORMANCE: A LITERATURE REVIEW STUDY

Chen Yueqin^{1*}, Lubna Ali Mohammed²

^{1*}Ph.D in Education, Department of Education, Faculty of Social Science, Arts and Humanities, Lincoln University College, Malaysia

²Ph.D in Education, Department of Education, Faculty of Social Science, Arts and Humanities, Lincoln University College, Malaysia

*Corresponding Author: Chen Yueqin

*Ph.D in Education, Department of Education, Faculty of Social Science, Arts and Humanities, Lincoln University College, Malaysia

Abstract

The central purpose that education serves at all levels is to ensure promotion of high quality of teaching as well as the learning process. Teachers themselves are trained with an objective of transferring their skills as well as knowledge to students to cultivate a distinctive character in the students that can be diverse enough to fit in the diverse global society. In this way the performance of teachers has remained a critical aspect in the evaluation of teachers' professional training and the capacity that it has in meeting its core objectives. It is in this respect that a literature review of the various research analysis that have been conducted on this subject and the findings which have been made in the process remains to be the central aim of this analytical work. The finding made by this analysis will also help in informing future evaluations on the subject hence giving the right trajectory of the analysis. In this respect, this analysis has been able to establish that, professional development for teachers is considered to be indispensable aspect of teachers' ability to deliver quality in their services as well as in their engagement. Professional development does encompass a wide array of things which can include but are not limited to taking part in different courses, conducting reflections in the teaching approaches that teachers themselves undertakes, making observations of the approaches that other teachers are utilizing as part of their teaching initiatives as well as engaging in conversation with fellow teachers both after and before teaching.

Introduction

The professional development factor in teachers' performance has been recognized by policy makers since the mid-1980s as illustrated by research conducted by Garet, Porter, Desimone,



All the articles published by Chelonian Conservation and Biology are licensed under aCreative Commons Attribution-NonCommercial 4.0 International License Based on a work at https://www.acgpublishing.com/

Birman & Yoon (2021) in this respect, professional development has been considered to be indispensable aspect of teachers' ability to deliver quality in their services as well as in their engagement. It is on this perspective that individuals like Guskey & Sparks (2020) believes that the quality of instruction that a teacher is capable of giving his or her students is subject to how developed is his or her professionalism. In this manner the quality that students are bound to get from their teacher according to Huffman, Thomas & Lawrenz (2023) is subject to the instructional quality while the instructional quality is dependent on the quality of the teacher which ultimately depends on the quality of the professional development that the teacher has been able to accumulate over time. In this respect individuals like Ingvarson, Meiers & Beavis (2020) have demonstrated that education is a lifelong process which does not have an end. The continuous enquiry nature of education makes the professional teachers to be lifelong exemplars in their professional engagement. In this way continuous professional development is an assure way of increasing the quality that the teachers are able to provide to their students. In this respect, the lifelong exemplar of teachers in their enquiry is a huge determinant of how effective their students are likely to perform and the quality that they are bound to give to their students. Through this approach professional development is often considered to be a sine qua non aspect of teachers' growth. It gives the justification for the continued enquiry by the teachers as a means of being in a position to continuously provide better quality for their students and improve on the performance that they are able to stage.

A significant number of research have paid significant attention on the impacts that professional development of teachers has in their ability performance in teaching and conducting their mandate. For instance, an analysis by Timperley, (2018) has paid crucial attention on teachers' professional learning and development. However, the analysis has not been able to give attention on the impacts that such learning and professional development has on students. In the same perspective an analysis by Garet, Porter, Desimone, Birman & Yoon (2021), focused its attention on what makes professional development effective, this is at the expense of illustrating the effectiveness of such professional development on student However, there is very little literal understanding of what professional development is and how the professional development does correlate with teachers' performance. In this manner conducting an evaluative analysis which focuses on literature review of teachers' professional development and how the development impacts their performance is an important aspect. This analysis therefore pays attention on conducting this literal work in order to build understanding on how teachers' professional development does impact their performance.

Aim of the study

The aim of this analysis is to engage in literature evaluation in a systematic way to help develop an understanding of how professional development of teachers does impact teachers` ability to perform.

Research Objectives

1) To assess the impact of Continuous Professional Development (CPD) programs on Teachers' instructional practices,

- 2) To assess the impact of Continuous Professional Development (CPD) programs on teachers' pedagogical knowledge
- 3) To assess the impact of Continuous Professional Development (CPD) programs on teacher the student outcomes to determine the effectiveness of CPD initiatives.

Research Methodology

The research analysis utilized secondary research method. The secondary research method involves utilization of already existing data from analysis which have been conducted on this field. In order to obtain the secondary sources, the analysis made use of desktop research. This involved searching for secondary sources on journal publications through tools like Google, Google Scholar and Research Journals. Once the desired sources were established through key words like *Professional development, Teachers professional development, Students' Professional training, Professional Growth* and many, they were evaluated based on how appropriate the methods used were and how appropriate the data presented were to this research analysis.

Literature review

The CPD, DEFINITION AND TYPES

Continuous professional development has been described as an organized and continuing process that entails the systematic acquisition of knowledge, skills, and competences related to one's trade or occupation. It is intended to gradually improve an individual's professional knowledge through learning activities, training, and reflection (García & Weiss, 2019). It has also been defined as the activities and experiences that professionals engage in to enhance their careers and remain current in their industry. It includes a variety of activities targeted at maintaining and developing professional competence, such as formal education, workshops, seminars, and self-directed learning (Postholm, 2018). Furthermore, CPD is a flexible and adaptive approach to professional development. It entails a never-ending cycle of planning, learning, applying information and abilities, and reflecting on one's own performance. CPD allows professionals to adapt to changes in their sector and successfully respond to changing challenges and opportunities. Some studies have defined CPD as a quality assurance technique that ensures professionals maintain and improve their ability to deliver high-quality services. It entails activities that assist professionals in staying current with best practices, legislation, and emerging trends in their sector, ultimately contributing to better service delivery (Zepeda, 2019).

Continuous Professional Development (CPD) refers to a variety of activities and tactics that attempt to improve an individual's professional knowledge, skills, and competence. Formal education and training programs, such as enrolling in degree programs, certificates, or short courses offered by educational institutions or online platforms, play an important part in CPD. These structured programs frequently lead to recognized qualifications and are necessary for remaining current in fast changing professions (Wasserman & Migdal, 2019). Professionals can also benefit from attending appropriate workshops, seminars, and conferences. These events allow attendees to hear from subject matter experts, network with peers, and obtain insights into the

most recent industry trends. Online learning and webinars have become more popular types of CPD in our digital age, providing the flexibility to acquire new skills and knowledge from the convenience of one's own location.

The impact of Continuous Professional Development (CPD) programs on teacher instructional practice

Continuous Professional Development (CPD) programs have a significant impact on teacher instructional methods, and they play an important role in increasing educational quality. One important result is an increase in teachers' pedagogical knowledge and skills. CPD initiatives allow instructors to have a better understanding of teaching concepts and instructional practices (Hayes et al., 2019). This information provides teachers with a greater choice of successful teaching strategies, helping them to engage students in the learning process more effectively. CPD programs can also help with classroom management. Teachers gain vital skills for creating a happy and conducive learning environment, effectively managing student conduct, and maintaining an organized classroom. This increased classroom management knowledge guarantees that instructional time is maximized and distractions are avoided, resulting in more productive learning experiences for students (Utami et al., 2019). CPD has also had a significant impact on the promotion of differentiated instruction. Teachers are educated to modify their teaching techniques, resources, and assessments to meet the demands of their students' different needs. This approach recognizes that each student is unique and may require customized educational tactics in order to realize their full potential. Classrooms become more inclusive and student-centered as a result (Sum et al., 2018).

Another facet of CPD that affects educational approaches is the incorporation of technology. Teachers learn how to use educational technology tools to improve their classroom instruction, engage students, and foster digital literacy. This not only modernizes classrooms but also provides pupils with essential digital skills for the twenty-first century. Data-driven decision-making is emphasized in CPD programs. Teachers are taught how to assess student progress, analyze assessment data, and modify educational tactics as needed. This emphasis on data guarantees that teaching approaches are constantly adjusted to fit unique learning needs, resulting in better student outcomes (Brouwer et al., 2022).

Inquiry-based learning is another teaching method that is frequently promoted through CPD. Teachers learn how to encourage student-led inquiry, critical thinking, and problem-solving abilities. This moves from traditional, teacher-centered instruction to more student-centered techniques encourage students' active participation and deeper knowledge (Andersson et al., 2022). CPD programs also encourage collaborative and reflective activities. Educators take part in professional learning groups, exchange ideas, and engage in critical self-evaluation. This collaborative and reflective process allows teachers to learn from one another, question their preconceptions, and improve their instructional methods.

The impact of Continuous Professional Development (CPD) programs on teacher, pedagogical knowledge

Continuous Professional Development (CPD) programs have a significant and positive impact on teachers' pedagogical expertise, which refers to their understanding of teaching concepts, tactics, and procedures. The expansion of instructors' teaching repertoire is one of the most visible effects of CPD on pedagogical expertise (Allen et al., 2019). CPD introduces educators to a variety of instructional methodologies, providing them with insights into numerous pedagogical strategies. This extended toolkit gives teachers the freedom to tailor their teaching strategies to varied learning styles, student demands, and classroom dynamics. Furthermore, CPD programs frequently include the most recent educational research and evidence-based approaches. CPD introduces teachers to research-based pedagogical tactics, allowing them to integrate their teaching methods with the most current and effective ways. This link to research keeps educators up to date on the finest educational approaches, enabling continuous progress in their pedagogical knowledge (Melesse & Gulie, 2019).

Another important effect of CPD programs is the customization of education. Educators learn the value of tailoring their teaching techniques, resources, and assessments to students' talents, interests, and backgrounds. This customized approach improves the adaptability of their pedagogical approaches, making education more accessible and successful for a diverse range of learners. CPD programs also cover classroom assessment strategies. Teachers gain knowledge of numerous evaluation methodologies, such as formative and summative assessments. This understanding enables educators to create tests that effectively assess student learning and inform instructional decisions, thereby enhancing the quality of their education. Another important part of CPD is reflective practice. Teachers are encouraged to participate in self-reflection and to evaluate their teaching methods and outcomes critically (Andersson et al., 2022). This introspective approach creates a greater understanding of their educational practices' strengths and flaws, resulting in ongoing growth in their pedagogical expertise and teaching effectiveness.

The impact of Continuous Professional Development (CPD) programs on student outcomes

Continuous Professional Development (CPD) programs have a significant impact on student results, altering students' educational experiences and achievements. Enhancing instructional methods is one of the key ways CPD programs have an influence on students. CPD provides educators with access to new information, innovative teaching practices, and effective pedagogical approaches. Students benefit from more interesting and powerful lessons when teachers apply these better instructional approaches in the classroom, which can lead to increased comprehension and academic performance.

CPD also frequently involves training in classroom management strategies (Sum et al., 2018). Effective classroom management promotes a positive and orderly learning atmosphere with minimal distractions, allowing students to focus on their studies. As a result, students can concentrate better, participate more actively in class, and achieve their academic goals. Another

important factor is CPD's emphasis on differentiated training. Teachers learn to modify their teaching techniques, materials, and assessments to meet the varying requirements of their students. This personalized approach ensures that each student receives specific assistance and challenges, resulting in higher levels of student engagement and accomplishment (Allen et al., 2020).

Technology integration is an important component of many CPD programs. Students frequently benefit from more dynamic and engaging learning when educators effectively integrate educational technology tools and digital resources. This technology interaction can help students grasp and remember course materials better. Data-driven decision making is encouraged by CPD. Teachers are taught to use data to inform their instruction, reviewing student progress on a regular basis and analyzing data to discover areas where students may be suffering. These insights enable educators to make timely changes to their teaching approaches, potentially leading to enhanced student learning results (Andersson et al., 2022).

Perspectives on professional development

Some scholars like Kellaghan, Greaney & Murray (2019) have often defined professional development to be a process that is continuous and engaging in ensuring that the teachers constantly remain in a state of learning. This involves the process of how they engage in learning as well as the application of the knowledge that they have learnt. This continuous learning in the perspective of Kyriakides & Creemers (2019) has always been considered to be in the interest of the students. That is because the reason for the existence of teachers is that the students who are dependent on them are able to gain the right approach to instructions and development. In this respect, scholars like Leithwood, Seashore Louis, Anderson & Wahlstrom (2020) argues that the process of teachers' learning can be both planned as well as unplanned. Librera, Eyck, Doolan, Brady & Aviss-Spedding (2020) also illustrates that the process can also be formal and informal. In this respect, professional development would encompass a wide array of things which can include but are not limited to taking part in different courses, conducting reflections in the teaching approaches that teachers themselves undertakes, making observations of the approaches that other teachers are utilizing as part of their teaching initiatives as well as engaging in conversation with fellow teachers both after and before teaching. Such an approach according to MacBeath & Dempster (2018) gives teachers a perspective into understanding the diverse dynamics that they encounter while engaging their students. In the process they are able to process new challenges that they face and develop an effective approach on how to handle such challenges for the benefit of their own students. Engaging in such initiatives according to Meiers & Ingvarson (2005) would increase the perceptive potentials of teachers hence elevating their ability to deliver a distinctive instructional approach to their students and that would promote better performance of the students in terms of understanding, participation as well as performance in their evaluation tests.

Whiles scholars like Robinson, Lloyd & Rowe (2018) have often argued that professional development is not the sole determinant of the teachers' performance in their practices, mainly because there are other factors that also contributes to the teachers' performance. In his perspective he argues that, teachers' performance can also be a factor of talent which is within the individual

teacher and does not depend on any way on the professional development. He further points out that, an examination of teachers with a distinctive talent in teaching has demonstrated a50% increased capacity to offer the best quality in terms of students' instruction as well as guidance of the students. Such teachers have also demonstrated twice as much capability to engage students, motivate them to undertake different challenges as well as to promote participation of students in both classwork as well as other outdoor activities. In this manner, his perspective is also supported by individual like Smith & Gillespie (2017) who notes that, teachers' professional development has been constantly front by most researchers who do not give attention to other alternative approaches through which teachers' performance can be improved and also dependent on. In this way, failing to pay attention to other alternative aspects that influence teachers' performance according to Supovitz & Turner (2020) is a miniaturized approach in understanding teachers' performance and fails to give credit to those teachers who are considered to be talented in their students' engagement hence have the capacity to deliver the right quality.

Professional experience

Taylor (2020) on the other hand also illustrates that, while fronting the relevance of professional development it is critical that significant attention should also be given to professional experiences that the teachers have been able to gain. The reason is because, debating on the professional development of teachers and the potential impact that such development has on performance of the individual teachers' minus giving crucial attention to the experience that the teacher Has in the field does not give a better picture in understanding how the teaching profession works. In this manner, Timperley (2018) also supports that there is a critical need to ensure that while evaluating and debating on the subject of teachers' professional development a lot of attention should also be given on other subject like professional experience that an individual teacher has. This attention is fundamental because it will enable the teachers not to focus all their attention on professional development at the expense of experiences that they need to gain as well as the talents that they have. In the same way, paying attention to all these factors is of huge significance in ensuring that the teaching profession is constantly improved. That is because it is through such knowledge and understand that teachers are made aware of the various factors that they need to pay attention in while they are engaging in their duties as teachers.

On the same light Villegas - Reimers (2023) is of the perspective that constantly paying attention to these factors is critical in providing a holistic avenue through which teachers can improve their performance and not neglecting any single aspect that is fundamental in ensuring that the performance of teachers in class is top notch. In this respect, professional development is lauded by Yoon, Duncan, Lee Wen-Yu, Scarloss & Shapley (2017) to be standing at the center of teaching profession performance potentials. However, he agrees with the perspective that individuals like Smith & Gillespie (2017) that, professional development cannot be used as the sole approach through which professional performance in teaching can be evaluated. In order to have a better perspective concerning teaching performance, there is an urgent need to acknowledge the fact that, professional development solely does not form the basis upon which teachers' performance can

be evaluated and can be established. That in return will encourage better and effective understanding of how teaching as a profession works and the need to pay attention on the critical aspects that informs and entails teaching performances. This will cultivate effectiveness and efficiency in how teachers are able to deliver their teaching duties and how they are also able to engage with their students to ensure that they provide the best that they are able to and to ensure that the students are also able to benefit from the teaching. That would have an overall impact that is likely to enhance the quality of teaching and the outcomes of teaching.

On the other hand, the proponents of the professional development in teaching have often argued that it is a body of a systematic activities that is aimed at preparing teachers for their jobs. In this manner Supovitz & Turner (2020) notes that teachers' professional development often does involve the initial training, the courses aimed at inducting the teachers into the profession as well as the in-service training and the continuous professional training. In this manner, Taylor (2020) also highlights that with all these aspects the often arguments that is always fronted by critics tend to fail because they do not consider the fact that when the subject of professional development for teachers is debated on, the issues of experiences as well as talents are often put into considerations. With all the aspects that entails the teaching process it is critical to pay attention to the fact teachers' professional development in itself does not negate the fact that, teachers' talents as well as teachers' experience is important. Instead it works in tandem to ensure that both the talent as well as the experiences that the teachers need in order to deliver quality teaching are all cultivated. Timperley (2018) for instance have constantly illustrated in his analysis that, teachers' professional development does not occur outside the confines of promoting and developing the individual talents that the teachers have. That is because the development in itself involves cultivating and reinforcing the individual talents that the teachers have since it would improve and contribute to the overall performance of the teachers and their ability to deliver quality instructions. The same perspective is also fronted by Villegas - Reimers (2023) who illustrates that, the experience that it accumulated by the teacher is a critical factor in ensuring that the quality of teaching that is provided by the teacher does meet the standards that are expected for the learners. In this way the professional development does put into consideration the need for the teachers to accumulate the needed experiences as well as the knowledge that is considered fundamental in order to promote better as well as improved teaching approaches. Through subjecting the teachers through training before, during as well as in between their professional growth is part of the approach that cultivates the professional experience needed by the teachers in order to develop in their career. Hence, professional development does not work in isolation of the need to cultivate these critical aspects in the teaching process. Guskey & Sparks (2020) tend to follow the perspective that, the professional development in itself works better to ensure that teachers' performance is achieved. That is because, it entails providing the right environment that will ensure that the teacher is able and capable of executing his or her responsibility in a way that meets the expectations not only of the student but also of other stakeholders. In this manner teachers' professional development is the landscape upon which the teacher is able to prepare and

elevate his or her capacity in delivering their mandate in order to provide better service to their students.

Instructional method and performance

Various research which have been conducted in this rea of analysis have pointed out to the fact that, instructional method that a teacher uses is fundamental to their performance. That is because it is through the instructional methods that the students are able to be impacted and attended to in an effective way. In this manner Kyriakides & Creemers (2019) illustrates that taking part in professional development is of huge importance for the teachers as it also impacts the instructional method that is being utilized by the teacher to handle the students. The instructional method that is effective whether it is a talent or experience, MacBeath & Dempster (2018) illustrates that it has to be supported by effective professional development. It is only through that, can a teacher have a clear and better perspective on how to handle students under different circumstances. It is also critical to note that, by engaging in professional development, the teacher is also capable of developing an instructional method that would work for the students at the individual level. The reason is because the teacher is able to develop an understanding that student is diverse from each other and it is important that this diversity is put into perspective in order to better help the individual students. In this way the outcomes of the instructions are likely to benefit students at the personal level and this have emerged to be a critical factor on improving performance.

However, scholars like Meiers & Ingvarson (2005) have criticized this approach by arguing that, it puts a lot of attention on the class performance of the students as the means through which the performance of a teacher can be evaluated. However, evaluating a teacher based on the performance of their students in class is adopting a reductive approach in understanding and promoting performance knowledge of the teacher as well as that of the students. In this way, it is important that, a broader perspective if the teachers' professional development has to be utilized, should also consider other aspects of performance like life skills as well as other skills which are critical and important outside the class. The perspective is cultivated by what Smith & Gillespie (2017) notes to be an over emphasis on the class performance of the students as a means through which the performance of an individual teacher can be evaluated and through which it can be promoted. In this respect, giving attention to professional development of the teacher should seek to also understand that, the teacher is also useful outside the confines of the class hours. The teacher also acts as an example, a role model as well as a motivation to students. That is in terms of behavior, character as well as personality. These are important aspects which are not taken care of in the professional development. Hence, if professional development has to be made effective, they have to put into consideration the need to also cultivate such elements like character, personality and behaviors which also have an immense impact on the students and their ultimate performance hence the performance of their teacher.

It is henceforth worth agreeing that, teachers' professional development is a critical initiative that every individual teacher has to pursue. That is because it serves to ensure that the performance of the teacher is enhanced for the benefit of the students. Supposite & Turner (2020) however,

illustrates that professional development for teachers is an aspect that is often associated with private schools. There is very little that is given attention to as far as professional development in public schools is concerned. Despite this perspective, Taylor (2020) argues that where professional development is given critical attention does not have a huge impact. The aim is for the better performance of the individual teacher in discharging his or her mandate as an instructor. It is important also to note that individuals like Timperley (2018) argues that most professional development that a significant number of teachers pursue is motivated by monetary value that is attached to it. That is because when an individual is considered to be effective in his or her performance as a result of their development in teaching profession they are bound to benefit financially or in other forms that is considered to be the central motivation behind pursuit of professional development amongst many individuals. Nonetheless it is important to note that his should not be the case. Reason being that the central focus for any form of development as far as teaching profession is concerned should be projected to the students who are the primary beneficiary of the professional development of their instructor. It is through this that the development that individual teacher gains in his or her profession would be in a position to make any form of sense, that is because it will be geared towards meeting the primary goal that the profession is often charged with and that which it is supposed to meet.

Findings And Discussion

From a close analysis of previous, the research is able to deduce a number of findings regarding the impact of teacher professional development on teachers' performance. To begin, CPD is critical to improving teaching quality. CPD provides teachers with current information and novel pedagogical practices, resulting in more interesting and effective lessons. This advancement in teaching approaches immediately helps students by providing a greater level of education. Second, CPD substantially contributes to excellent classroom management techniques. Educators learn how to build and maintain a conducive learning environment that minimizes disturbances and allows students to concentrate on their academics. As a result, student engagement and overall learning experiences improve.

Furthermore, CPD promotes differentiated instruction, allowing teachers to customize their teaching approaches to the requirements of individual students. This tailored approach promotes a more inclusive classroom environment, which leads to better student engagement and academic performance. Besides, the incorporation of technology into education, which is an important component of CPD, enhances students' learning experiences. Students gain from interactive and dynamic classes when educators use digital resources successfully, which can improve their grasp of course materials.

CPD promotes data-driven education. Teachers learn to alter their educational tactics based on assessment data, identifying and addressing areas where pupils may be underperforming. This data-driven strategy is beneficial in terms of enhancing student learning results. CPD frequently emphasizes inquiry-based and student-centered learning approaches in terms of teaching

methodologies. These techniques foster student enthusiasm and involvement, which leads to greater comprehension and higher academic success.

Another important conclusion is that CPD improves student involvement. Students are more likely to actively participate in their learning when CPD programs stress creative and research-based teaching methods, resulting in higher retention of knowledge and increased excitement for learning. Finally, CPD programs can lead to the adoption of good instructional approaches, which can lead to greater academic achievement among students. Improved teaching approaches, differentiation, technological integration, and data-driven decision making all contribute to higher levels of student achievement.

Conclusion

In this respect, the lifelong exemplar of teachers in their enquiry is a huge determinant of how effective their students are likely to perform and the quality that they are bound to give to their students. Through this approach professional development is often considered to be a sine qua non aspect of teachers' growth. It gives the justification for the continued enquiry by the teachers as a means of being in a position to continuously provide better quality for their students and improve on the performance that they are able to stage.

References

- 1. Allen, L. M., Hay, M., Armstrong, E., & Palermo, C. (2020). Applying a social theory of learning to explain the possible impacts of continuing professional development (CPD) programs. *Medical Teacher*, 42(10), 1140-1147.
- 2. Allen, L. M., Palermo, C., Armstrong, E., & Hay, M. (2019). Categorising the broad impacts of continuing professional development: a scoping review. *Medical education*, *53*(11), 1087-1099.
- 3. Andersson, K., Sandgren, O., Rosqvist, I., Lyberg Åhlander, V., Hansson, K., & Sahlén, B. (2022). Enhancing teachers' classroom communication skills—Measuring the effect of a continued professional development programme for mainstream school teachers. *Child Language Teaching and Therapy*, 38(2), 166-179.
- 4. Andersson, K., Sandgren, O., Rosqvist, I., Lyberg Åhlander, V., Hansson, K., & Sahlén, B. (2022). Enhancing teachers' classroom communication skills—Measuring the effect of a continued professional development programme for mainstream school teachers. *Child Language Teaching and Therapy*, 38(2), 166-179.
- 5. Brouwer, N., Joling, E., & Kaper, W. (2022). Effect of a person-centred, tailor-made, teaching practice-oriented training programme on continuous professional development of STEM lecturers. *Teaching and Teacher Education*, 119, 103848.
- 6. García, E., & Weiss, E. (2019). The Role of Early Career Supports, Continuous Professional Development, and Learning Communities in the Teacher Shortage. The Fifth Report in The Perfect Storm in the Teacher Labor Market Series. *Economic Policy Institute*.

- 7. Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2021). What Makes Professional Development Effective? Results from a National Sample of Teachers. *American Educational Research Journal*, 38(4), pp. 915 945.
- 8. Guskey, T. R., & Sparks, D. (2020). Linking Professional Development to Improvements in Student Learning. In E. M. Guyton, & J. Rainer Dangel (Eds.), Research Linking Teacher Preparation and Student Performance (pp. 11-22). Dubuque: Kendall/Hunt Publishing Company.
- 9. Hayes, D., Walsh, S., & Mann, S. (2019). Continuing professional development/continuous professional learning for English language teachers. *The Routledge handbook of English language teacher education*, 155-168.
- 10. Huffman, D., Thomas, K., & Lawrenz, F. (2023). Relationship between Professional Development, Teachers' Instructional Practices and the Achievement of Students in Science and Mathematics. *School Science and Mathematics*, 103(8), pp. 378-387.
- 11. Ingvarson, L., Meiers, M., & Beavis, A. (2020). Practice, Student Outcomes & Efficacy. Education Policy Analysis Archives, 13,10. http://research.acer.edu.au/professional_dev/1 (21.1.2021).
- 12. Kellaghan, T., Greaney, V., & Murray, T. S. (2019). Using the Results of a National Assessment of Educational Achievement. Washington: The World Bank.
- 13. Kyriakides, L., & Creemers, B. P. M. (2019). The effects of teacher factors on different outcomes: two studies testing the validity of the dynamic model. *Effective Education*, 1, pp. 61-85. http://www.tandfonline.com/doi/pdf/10.1080/19415530903043680 (26.12.2020).
- 14. Leithwood, K., Seashore Louis, K., Anderson, S., & Wahlstrom, K. (2020). How leadership influences student learning. Minessota and Toronto: Center for Applied Research and Educational Improvement, Ontario Institute for Studies in Education and The Wallace Foundation.
- 15. Librera, W. L., Eyck, R. T., Doolan, J., Brady, J., & Aviss-Spedding, E. (2020). New Jersey Professional Standards for Teachers and School Leaders. Trenton: New Jersey Department of Education.
- 16. MacBeath, J., & Dempster, N. (2018). Connecting leadership and learning. Principles of practice. Oxon: Routledge.
- 17. Meiers, M., & Ingvarson, L. (2018). Investigating the links between teacher professional development and student learning outcomes. Camberwell: Australian Council for Educational Research.
- 18. Melesse, S., & Gulie, K. (2019). The implementation of teachers' continuous professional development and its impact on educational quality: Primary schools in Fagita Lekoma Woreda, Awi Zone, Amhara Region, Ethiopia in focus. *Research in Pedagogy*, 9(1), 81-94.
- 19. Postholm, M. B. (2018). Teachers' professional development in school: A review study. *Cogent education*, 5(1), 1522781.

- 20. Robinson, V. M. J., Lloyd, C. A., & Rowe, K. J. (2018). The Impact of Leadership on Student Outcomes: An Analysis of the Differential Effects of Leadership Types. *Educational Administration Quarterly*, 44(5), pp. 635-674.
- 21. Smith, C., & Gillespie, M. (2017). Research on Professional Development and Teacher Change: Implications for Adult Basic Education. In J. Comings, B. Garner, & C. Smith, (Eds.), Review of Adult Learning and Literacy (pp. 205-244). Mahwah, New Jersey: Lawrence Erlbaum Associates.
- 22. Sum, K. W. R., Wallhead, T., Ha, S. C. A., & Sit, H. P. C. (2018). Effects of physical education continuing professional development on teachers' physical literacy and self-efficacy and students' learning outcomes. *International Journal of Educational Research*, 88, 1-8.
- 23. Sum, K. W. R., Wallhead, T., Ha, S. C. A., & Sit, H. P. C. (2018). Effects of physical education continuing professional development on teachers' physical literacy and self-efficacy and students' learning outcomes. *International Journal of Educational Research*, 88, 1-8.
- 24. Supovitz, J. A., & Turner, H. M. (2020). The Effects of Professional Development on Science Teaching Practices and Classroom Culture. *Journal of Research in Science Teaching*, 37(9), pp. 963-980.
- 25. Taylor, R. T. (2020). Leadership to Improve Student Achievement: Focus the Culture on Learning. AASA Journal of Scholarship and Practice, 7(1), pp. 10-23.
- 26. Timperley, H. (2018). Teacher professional learning and development. Brussels: International Academy of Education in International Bureau of Education.
- 27. Utami, I. L. P., Prestridge, S., Saukah, A., & Hamied, F. A. (2019). Continuing Professional Development and teachers' perceptions and practices-A tenable relationship. *Indonesian Journal of Applied Linguistics*, 9(1), 108-118.
- 28. Villegas Reimers, E. (2023). Teacher professional development: an international review of literature. Paris: International Institute for Educational Planning. http://www.cndwebzine.hcp.ma/cnd_sii/IMG/pdf/HTTP ~4.PDF (16.7.2010).
- 29. Wasserman, E., & Migdal, R. (2019). Professional Development: Teachers' Attitudes in Online and Traditional Training Courses. *Online Learning*, 23(1), 132-143.
- 30. Yoon, K. S., Duncan, T., Lee Wen-Yu, S., Scarloss, B., & Shapley, K. L. (2017). Reviewing the evidence on how teacher professional development affects student achievement. Washington: Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest. http://ies.ed.gov/ncee/edlabs (21.8.2010).
- 31. Zepeda, S. J. (2019). Professional development: What works. Routledge.