

## Teacher Professional Development in Public Schools in Metropolitan Lima, Perú

Desarrollo Profesional Docente en Escuelas Públicas de Lima Metropolitana, Perú

P: 26 - 34

 Olga Laura Saldarriaga Ccoricasa  
Universidad César Vallejo, Perú  
[olgalaurosaldarriaga@gmail.com](mailto:olgalaurosaldarriaga@gmail.com)

 Mildred Jénica Ledesma Cuadros  
Universidad César Vallejo, Perú  
[mildred.ledesma@gmail.com](mailto:mildred.ledesma@gmail.com)

### Abstract

Improving the quality of education is a constant concern; therefore, among many factors, it is inevitable to consider teachers' professional development as an essential element to meet the demands of society. The purpose of this study was to determine the differences in the factors associated with teachers' professional development in public school teachers in Metropolitan Lima, Peru, according to their academic degree, sex and level of education. The research approach was quantitative, non-experimental design, descriptive type, comparative level. The instrument used was the Teacher Professional Development Questionnaire (Porras, 2020), obtained through a Google form; the sample consisted of 384 public school teachers. The findings show that there are no significant differences in teachers' professional development according to sex; however, there are significant statistical differences in teachers' professional development according to work status; according to the level where they work and according to academic degree. It is concluded that there are no significant differences in the professional development of teachers according to sex; however, there are significant differences in terms of work status, level of employment and academic degree, with professional development being an opportunity for learning and continuous improvement of teaching practice.

**Keywords:** Professional development, teacher, schools, teaching.

### Resumen

Mejorar la calidad de la educación es una preocupación constante; por lo que, entre muchos factores, es inevitable considerar el desarrollo profesional docente como un elemento esencial para satisfacer las demandas de la sociedad. El propósito de este estudio fue determinar las diferencias en los factores asociados al desarrollo profesional docente en docentes de escuelas públicas de Lima Metropolitana, Perú, según su grado académico, sexo y nivel de educación. El enfoque de la investigación fue cuantitativo, diseño no experimental, tipo descriptivo, nivel comparativo. El instrumento utilizado fue el Cuestionario de Desarrollo Profesional Docente (Porras, 2020), obtenido a través de un formulario de Google; la muestra estuvo compuesta por 384 docentes de escuelas públicas. Los hallazgos muestran que no existen diferencias estadísticas significativas en el desarrollo profesional docente según la situación laboral; según el nivel donde se desempeñan y según el grado académico. Se concluye que no existen diferencias significativas en el desarrollo profesional de los docentes según sexo; sin embargo, existen diferencias significativas en cuanto a situación laboral, nivel de empleo y grado académico, siendo el desarrollo profesional una oportunidad de aprendizaje y mejora continua de la práctica docente.

**Palabras claves:** Desarrollo profesional, docente, escuelas, enseñanza.

### Abstrato

Melhorar a qualidade do ensino é uma preocupação constante; portanto, entre tantos fatores, é inevitável considerar o desenvolvimento profissional dos professores como elemento essencial para atender às demandas da sociedade. O objetivo deste estudo foi determinar as diferenças nos fatores associados ao desenvolvimento profissional docente em professores de escolas públicas na região metropolitana de Lima, Peru, de acordo com seu grau acadêmico, sexo e nível de escolaridade. A abordagem da pesquisa foi quantitativa, delineamento não experimental, tipo descritivo, nível comparativo. O instrumento utilizado foi o Questionário de Desenvolvimento Profissional Docente (Porras, 2020), obtido por meio de formulário Google; a amostra foi composta por 384 professores de escolas públicas. Os resultados mostram que não existem diferenças significativas no desenvolvimento profissional dos professores de acordo com o sexo; no entanto, existem diferenças estatísticas significativas no desenvolvimento profissional dos professores de acordo com a situação profissional; de acordo com o nível onde trabalham e de acordo com o grau acadêmico. Conclui-se que não existem diferenças significativas no desenvolvimento profissional dos professores segundo o sexo; no entanto, existem diferenças significativas em termos de situação profissional, nível de emprego e grau acadêmico, sendo o desenvolvimento profissional uma oportunidade de aprendizagem e melhoria contínua da prática docente.

**Palavras-chave:** Desenvolvimento profissional, professor, escolas, ensino.


Publicado: 27/12/2023

Aceptado: 12/10/2023

Recibido: 09/10/2023

Open Access

Scientific article

 <https://doi.org/10.47422/ac.v4i4.158>

Este artículo es publicado por la Revista de Investigación Científica y Tecnológica Alpha Centauri, Professionals On Line SAC. Este es un artículo de acceso abierto, distribuido bajo los términos de la Licencia Creative Commons Atribución 4.0 Internacional (<https://creativecommons.org/licenses/by/4.0/>) que permite compartir (copiar y redistribuir el material en cualquier medio o formato) y adaptar (remezclar, transformar y construir a partir del material) para cualquier propósito, incluso comercialmente.

## INTRODUCTION

In recent times, the demands and expectations for better quality teaching and learning have received greater interest from education policymakers, researchers, and school leaders (Hillel & Ramírez-García, 2022).

Focusing on the quality of teaching practice, it is stated that it depends on the acquisition of relevant knowledge and skills that can guarantee effective teaching; For this reason, the continuous professional development of professionals in the education sector is a key element to guarantee the quality required in teaching (Acevedo & Sánchez, 2021); This need is evidenced with greater intensity in the current post-pandemic context due to the urgency of responding to the educational needs of students as well as the absence of actions aimed at teacher development in knowledge and application in the area Technological.

Improving the quality of education is a constant interest, therefore, the need to change the strategies used for the development of the teaching career, highlighting the importance of a system that allows regulating the professional field of in-service teachers and that positively influences it (Cordero & Pedroza, 2021).

In this sense, it is inevitable to consider teacher professional development no longer as an option, but as a primary element to face the demands of society (Vargas et al., 2021).

Internationally, many teachers in low-resource countries lack the skills to teach effectively; professional development programs are the main tool used by governments to reverse teacher problems and achieve improvements in pedagogical practice (Hassler et al., 2018).

In countries with greater economic resources, teachers develop professionally through courses, workshops, conferences, seminars, observation visits or in-service training, obtaining improvements in their classroom performance and learning achievements; this participation is linked to incentives such as promotion or increase in their assets (Sims & Fletcher-Wood, 2021).

On the other hand, in the Latin American context, important progress has been made through educational reforms supported by the contributions of various multilateral organizations, focused on raising the level

of teaching practice and thus improving educational quality and coverage (Herrera, 2019). These changes were due to the low results in student learning obtained in the different evaluations, inadequate training systems, as well as the meagre budgets allocated (Ríos, 2019); Currently, investment in education is an aspect that generates concern in government authorities, due to the fact that the impact of the pandemic is still latent (ECLAC, 2020).

In Peru, in a study carried out with teachers and students of pedagogy, more than 95% have positive attitudes regarding their career and professional development; Despite this, it was noted that 19 per cent of teachers have a dissatisfied attitude with the salaries they receive; likewise, 31% of them show a negative attitude towards interpersonal relationships with their colleagues (UNESCO, 2017). Teachers' perceptions and attitudes regarding their profession, job satisfaction, and relationships between teachers within their school influence their professional development (García-García et al., 2019).

In this country, the normative document Framework for Good Teaching Performance is a tool that presents clear guidelines for teacher training, advocates rigor in the evaluation of teaching practice, encourages and recognizes good performance and, above all, good practices in their eagerness to achieve permanent professional development (Minedu, 2014).

Although progress has been made in the establishment of teacher policies, there are still shortcomings in the material conditions that allow ensuring the continuity of teacher professional development (Cuenca & Vargas, 2018); this is a fact that hinders the path towards educational quality.

Teacher professional development programs must respond to the pedagogical needs of teachers, in such a way as to fill those gaps in their initial training regarding knowledge, attitudes, and skills in order to improve their performance in the classroom and promote better learning in their students (Tican & Dinçman, 2022).

Taking into account the particular context of each school is very important, this would make professional development more relevant to the daily work of teachers; in addition, the relevance of the contents; professional development in schools has other advantages such as increased collaboration between teachers, initiation or reinforcement of collective

reflection on teaching practice, and school improvement (Cho et al., 2021); this way of determining the content of teacher development programs is not to squander the resources allocated, as some previous studies have stated (Maboya et al., 2022); On the contrary, it is essential to plan professional development programs according to the specific needs of the teacher, prioritizing follow-up and advice to the detriment of training actions focused on instrumental and pedagogical elements (Dos Santos et al., 2018).

Teacher professional development is related to teachers' learning and the use of such knowledge and skills in the classroom to improve the academic level of students and the quality of education in a sustainable way (Meesuk et al., 2021); In the same vein, it can be said that it is important for teacher development to be recognized by peers and receive incentives from their managers and the entity. It is important to encourage them to continue strengthening their pedagogical practice, not only through formal courses but also through the exchange of experiences among colleagues within educational institutions (Bolívar, 2015, cited in Bakieva et al., 2019).

The professional development of teachers is not only focused on their training; but also, it involves social, personal and affective relationships in its different areas, among which is the professional aspect that involves promotions, academic publications, among others; and the institutional aspect such as the school's organizational structure, work environment, etc., which enable or interfere with the development of the teaching career (Imbernón, 2020).

The technical-pedagogical, personal, social and institutional factors considered in this article are those proposed by Silva (2007).

The technical-pedagogical factor of teacher professional development is linked to teaching; that is, the use of educational and didactic resources, curriculum planning and the autonomy of the teacher in the development of his or her work (Porrás, 2020); likewise, with respect to educational materials, it includes analysis and production (Barolli et al., 2019).

The second factor, social personnel, it is related to the teacher's self-critical reflection on their pedagogical practice, assuming difficulties as a starting point for improvement in their performance, another aspect of this factor is the satisfaction they

have in their workplace for being recognized and the security they demonstrate in the exercise of their career (Porrás, 2020; UNESCO, 2019) and the third factor, institutional, refers to the participation of teachers in the cultural aspects of school organization, demonstrating involvement in the actions considered in the annual work plan; in the same way, they interact with their peers, enabling collaborative work and reflection (Matranga, 2022; Porrás, 2020). Developing this factor requires attention to opinions and expectations in the teaching career as well as to the teacher's self-perception of his or her role (Makovec, 2018).

## METHODOLOGY

The focus of this study was quantitative, non-experimental, descriptive and comparative. The sample consisted of 384 teachers from state schools in Metropolitan Lima, the sampling was intentional non-probabilistic, the technique used to collect the data was the survey, whose instrument was the questionnaire "Teacher Professional Development" 1, whose authorship corresponds to the aforementioned author, Porrás, which was reached by Google form, this instrument consisted of 30 items, distributed in 3 factors (technical, pedagogical, personal, social and institutional) whose scale was Likert (Always, Sometimes, Never), being their levels and ranges: High (61-90), Medium (31-60), Low (30-1) the content value was made through expert judgment. The concordance test was used through Aiken's Coefficient V (0.97), reliability was performed with Cronbach's Alpha statistic (0.901 - very high); SPSS V25 was used to perform the data analysis, considering that the addressed variable is statistically qualitative ordinal. Finally, the Friedman test was applied, as it is non-parametric applied to a sample with various factors, and the Mann-Whitney U test was applied to find the differences according to sex, work condition, level of work and academic degree of the teachers participating in the study.

## RESULTS

### Descriptive analysis

As can be seen in Table 1 and Figure 1, teacher professional development in the sample studied represents a low level of 18.8%, medium 43% and high 38.3%; in general, between medium and high prevails 81.3%, which implies a significant effort and self-interest in teacher professional development in the schools studied; although there are aspects that can

be improved if we look at the low and medium level, which together represent 61.8%.

**Table 1**

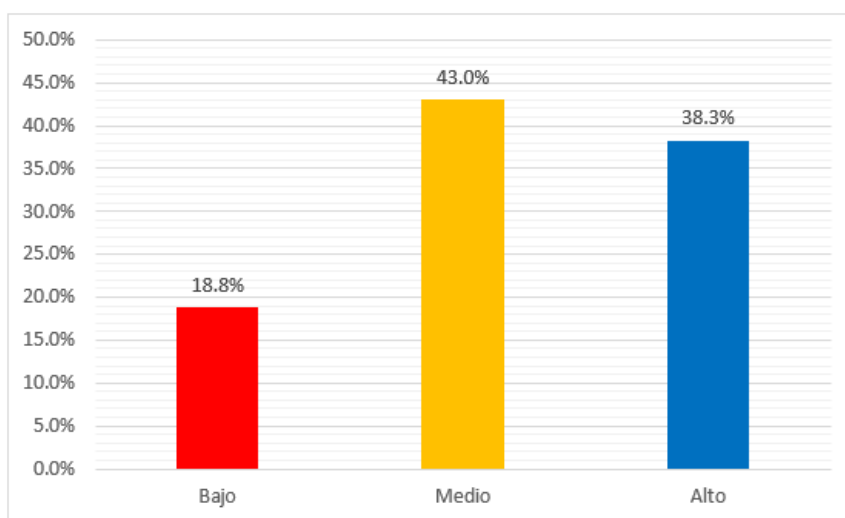
*Teacher Professional Development.*

Level	Frequency	Percentage
Low	72	18.8
Middle	165	43.0
High	147	38.3
Total	384	100,0

Source: Teacher Professional Development Questionnaire Database SPSS V.25

**Figure 1**

*Frequency diagram of the levels of Teacher Professional Development*

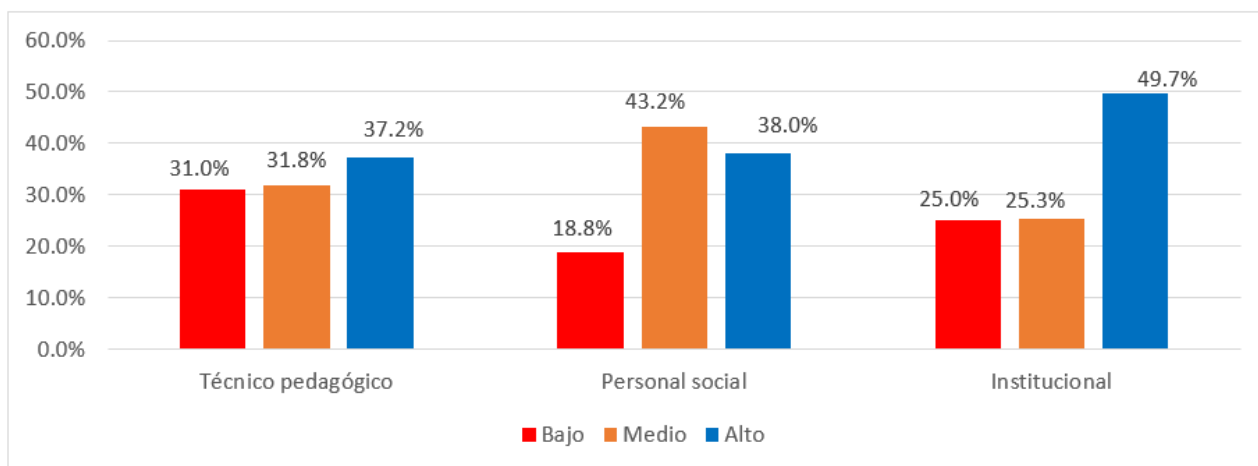


As can be seen in Figure 2, in the factors that involve teacher professional development, a high level prevails in pedagogical technical development (37.2%) and institutional professional development (49.7%), in the personal social development factor a medium level prevails (43.2%). In general, this

reflects the fact that the factors that comprise the professional development of teachers are being well conducted by their own actors, there are some aspects that would be important to enhance, as is the case of professional development in the personal and social factor.

**Figure 2**

*Diagram of frequencies of Teacher Professional Development according to factors involved*



As can be seen in Table 2, teacher professional development by sex has better levels in women, reaching a high level of 41.3%, while in men it has a high level of 29.6%

**Table 2**

*Teacher Professional Development by Gender*

		Level		
		Initial	Primary	High school
Teacher Professional Development	Low	4 12,1%	43 17,7%	25 23,1%
	Middle	9 27,3%	102 42,0%	54 50,0%
	High	20 60,6%	98 40,3%	29 26,9%
Total		33 100,0%	243 100,0%	108 100,0%

Source: Teacher Professional Development Questionnaire Database SPSS V.25

As can be seen in Table 4, the professional development of teachers according to academic degree presents better results in those professionals who have a doctorate degree (high, 73.7%), followed by those

professionals who have a master's degree (high, 37.6%) and finally those professionals who have a bachelor's degree (high, 35.2%).

**Table 4**

*Teacher Professional Development according to academic degree*

		Academic degree		
		High school	Doctorate	Mastery
Teacher Professional Development	Low	40 22,3%	2 10,5%	30 16,1%
	Middle	76 42,5%	3 15,8%	86 46,2%
	High	63 35,2%	14 73,7%	70 37,6%
Total		179 100,0%	19 100,0%	186 100,0%

As can be seen in Table 5, teacher professional development according to employment status presents better levels in hired staff with a high level of 49.6% compared to appointed staff with a high level of 33.6%.

**Table 5**

*Teacher Professional Development according to working conditions*

		Employment Status	
		Contract Teacher	Appointed Teacher
Teacher Professional Development	Low	16 14,2%	56 20,7%
	Middle	41 36,3%	124 45,8%
	High	56 49,6%	91 33,6%
Total		113 100,0%	271 100,0%

Source: Teacher Professional Development Questionnaire Database SPSS V.25

**Inferential Analysis**

If p-value < 0.05, the Null Hypothesis (Ho) is rejected. And, Ha is accepted

**Hypothesis Testing**

In Table 6, the result of the p\_valor of the Friedman test p\_valor = 0.002 < 0.05; therefore, Ho is rejected. Therefore, it can be stated that: there are significant

Decision rule;

If p-value > 0.05, the Null Hypothesis (Ho) is accepted



differences between the factors associated with the professional development of teachers in public schools in Metropolitan Lima.

**Table 6**

*Friedman's Test*

*Test-to-Test* Statisticians

N	384
Chi-square	12,911
Gl	2
Asymptotic sig.	,002

to. Friedman's Test

Source: Teacher Professional Development Questionnaire Database SPSS V.25

Likewise, in Table 7, it can be observed that the result of the p\_valor of the Mann-Whitney U test p\_valor = 0.110 > 0.05; There are no statistically significant differences in teacher professional development according to sex.

**Table 7**

*Mann-Whitney U Test: Difference by Sex*

*Test-to-Test* Statisticians

	Teacher Professional Development
U de Mann-Whitney	12611,500
W for Wilcoxon	17462,500
Z	-1,597
Asymptotic sig. (bilateral)	,110

to. Grouping variable: Sex

Source: Teacher Professional Development Questionnaire Database SPSS V.25

Likewise, in Table 8, it can be observed that the result of the p\_valor of the Mann-Whitney U test p\_valor = 0.005 < 0.05; There are significant statistical differences in teacher professional development according to working conditions.

**Table 8**

*Mann-Whitney U Test Difference According to Work Condition*

*Test-to-Test* Statisticians

	Teacher Professional Development
U de Mann-Whitney	12709,000
W for Wilcoxon	49565,000
Z	-2,835
Asymptotic sig. (bilateral)	,005

to. Grouping variable: Employment Status

Source: Teacher Professional Development Questionnaire Database SPSS V.25

Likewise, in Table 9, it can be observed that the result of the p\_valor of the Kruskal Wallis test p\_valor = 0.003 < 0.05; There are statistically significant differences in teacher professional development according to initial, primary and secondary levels.





**Table 9**

*Kruskal Wallis Test Difference by Level*

Test Statisticians<sup>a,b</sup>

	Teacher Professional Development
H for Kruskal-Wallis	11,566
G1	2
Asymptotic sig.	,003

to. Kruskal Wallis Test

b. Grouping Variable: Level

Source: Teacher Professional Development Questionnaire Database SPSS V.25

Likewise, in Table 10, it can be observed that the result of the p\_valor of the Kruskal Wallis test  $p\_valor = 0.011 < 0.05$ ; There are statistically significant differences in the professional development of teachers according to academic degree.

**Table 10**

*Kruskal Wallis test differentiates according to academic grade*

Test Statisticians<sup>a,b</sup>

	Teacher Professional Development
H for Kruskal-Wallis	9,060
G1	2
Asymptotic sig.	,011

to. Kruskal Wallis Test

b. Grouping variable: Academic degree

**DISCUSSION**

The present study, in reference to the general objective, has demonstrated through the Friedman test, that there are significant differences between the factors associated with the professional development of teachers in public schools in Metropolitan Lima. It has been found that in the factors that involve teacher professional development, pedagogical technical development prevails at a high level (37.2%), agreeing with the findings of Makovec (2018) where a high value is given to the technical-pedagogical dimension in relation to the planning and implementation of learning activities and the use of various methods for instruction. Likewise, the institutional professional development factor prevails at a high level (49.7%), referring to this factor, Cisternas (2019) pointed out the importance of valuing spaces for reflection and analysis of pedagogical practices by teachers for the improvement of their competencies; learning is significant as a result of sharing experiences, an activity that also promotes, strengthening relationships between teachers.

In contrast to the results of this study, we find Escribano (2018) in whose research he concluded that in Latin America the conditions for teaching work are discouraging due to the fact that pedagogical innovation and good practices in the classroom are not encouraged. As for social recognition, it is almost non-existent.

The results in general reflect that the factors that comprise the professional development of teachers are being well conducted by their own actors, there are some aspects that would be important to enhance, such as the personal and social factor.

Likewise, it was found that there are statistically significant differences in the professional development of teachers according to sex, with a high level of female sex 41.3% and male sex 29.6%; which differs from the findings found by Hillel & Ramírez-García (2022) where no statistically significant associations were observed between the variable teacher professional development and demographic characteristics related to men and women; In the professional development of teachers according to



their working condition, there are statistically significant differences, with 49.6% of the hired staff and 33.6% of the appointed staff having a high level; According to Unesco (2017), job insecurity drives contracted teachers to develop more favorable attitudes towards personal relationships and the fulfillment of institutional activities.

There are statistically significant differences in teacher professional development according to level: initial (high, 60.6%), primary (high, 40.3%) and secondary (high, 26.9%), unlike the findings of the Organisation for Economic Co-operation and Development (2018) who stated that teachers' participation in teacher professional development is almost universal, regardless of the level of education they teach. Primary teachers tend to be slightly more involved in teacher professional development activities than secondary school teachers.

In the professional development of teachers according to academic degree, the following results were obtained, with the degree of doctor (high, 73.7%), teacher (high, 37.6%) and bachelor (high, 35.2%), with significant statistical differences; the findings are similar to those found by Hillel & Ramírez-García (2022) in which it was observed that there are statistically significant differences in teachers with different educational levels; according to Orellana-Fernández et al., 2018, the academic degree is recognized in various areas as an indicator of quality; In addition, according to school principals, academic distinctions are endorsed in the teacher's work performance.

## CONCLUSIONS

The research shows, according to the processed results, that the professional development of teachers in the sample studied, at a low level, represents 18.8%, medium 43% and high 38.3%; in general, between medium and high prevails 81.3%, which implies an important effort and self-interest in the professional development of teachers in the public schools studied; although there are aspects to continue improving if we look at the low and medium level that together represent a 61.8%.

In addition, there are statistically significant differences in the factors involved in teacher professional development, having determined that at a high level technical pedagogical development prevails (37.2%) and institutional professional development (49.7%), in the personal social development factor a medium level prevails (43.2%). In general, this reflects the fact that the factors that comprise the

professional development of teachers are being well conducted by their own actors, there are some aspects that would be important to enhance, such as the case of professional development in the personal and social factor.

Teacher professional development is an opportunity for learning and improving pedagogical practice in the classroom, as long as these programs respond to the professional needs of teachers; and spaces for the exchange of experiences among peers are provided, taking into account the context, values, becoming aware of the daily work in the classroom as part of the construction of knowledge and the strengthening of collaborative work.

## REFERENCES

- [1]. Acevedo, A., & Sánchez, A. (2021). Continuous training and professional development of teachers in the area of Social Sciences. *Journal of Education Sciences*, 31(58), 467–494. <http://servicio.bc.uc.edu.ve/educacion/revista/58/art04.pdf>
- [2]. Bakieva, M., Gonzalez, J., & Sancho, C. (2019). The Role of Collegiality in the Professional Development of the Teaching Career: A Proposal for an Evaluation Instrument. *Publications*, 49(1), 191–218. <https://doi.org/10.30827/publicaciones.v49i1.9862>
- [3]. Barolli, E., Nascimento, W., de Oliveira, J., & Villani, A. (2019). Professional Development of Science Teachers: Dimensions of Analysis. *Electronic Journal of Science Education*, 18(1), 173–197. <http://revistas.educacioneditora.net/index.php/REE/C/article/view/368>
- [4]. ECLAC. (2020). Education in times of the COVID-19 pandemic. [https://repositorio.cepal.org/bitstream/handle/11362/45904/1/S2000510\\_es.pdf](https://repositorio.cepal.org/bitstream/handle/11362/45904/1/S2000510_es.pdf)
- [5]. Cho, M.-H., Lim, S., & Hwang, H. (2021). Teacher Professional Development: Approaches and Lessons from a Pilot Study in Ethiopia. *The Teacher Educator*, 56(1), 25–42. <https://doi.org/10.1080/08878730.2020.1767743>
- [6]. Cisternas, R. (2019). Teacher training and professional development today. *Didactic Publications*. <https://publicacionesdidacticas.com/hemeroteca/articulo/104018/articulo-pdf>
- [7]. Cordero, G., & Pedroza, L. (2021). Policies for Teaching Careers and Professional Development in Mexico in light of Talis' results. *Mexican Journal of Educational Research*, 26(89), 503–531. <https://eds.p.ebscohost.com/eds/pdfviewer/pdfviewer?vid=11&sid=d7c0aa30-def6-4e79-b697-a469e20616c8%40redis>
- [8]. Cuenca, R., & Vargas, J. (2018). PERU: The State of Public Policies for Teachers (IEP (ed.)).



- <http://repositorio.minedu.gob.pe/handle/MINEDU/5868>
- [9]. Dos Santos, B., Spagnolo, C., & Stöbaus, C. (2018). O desenvolvimento profissional docente na contemporaneidade: implicações transformadoras para o ser e para o fazer. *Educação*, 41(1), 74–82. <https://doi.org/10.15448/1981-2582.2018.1.29721>
- [10]. Escribano, E. (2018). Teacher performance as a factor associated with educational quality in Latin America. *Revista Educación*, 42(2). <https://doi.org/https://doi.org/10.15517/revedu.v42i2.27033>
- [11]. García-García, F., Quesada-Armenteros, A., Romero, M., & Abril, A. (2019). Promoting Inquiry in Mathematics and Science: Teacher Professional Development in Primary and Secondary Education. *Education XX1*, 22(2), 335–359. <https://doi.org/10.5944/educxx1.23513>
- [12]. Hassler, B., Hennessy, S., & Hofmann, R. (2018). Sustaining and Scaling Up Pedagogic Innovation in Sub-Saharan Africa: Grounded Insights for Teacher Professional Development. *Journal of Learning for Development*, 5(1), 58–78. <https://docs.opendeved.net/lib/D2GQYC5S>
- [13]. Herrera, J. (2019). Analysis of the systems of admission, permanence, promotions and teacher incentives in the Latin American context. In *Culture, Education and Society* (Vol. 10, Issue 1, pp. 67–78). <https://doi.org/10.17981/cultedusoc.10.1.2019.05>
- [14]. Hilel, A., & Ramírez-García, A. (2022). The Relationship between Professional Environmental Factors and Teacher Professional Development in Israeli Schools. *Education Sciences*, 12(285), 1–11. <https://eds.p.ebscohost.com/eds/pdfviewer/pdfviewer?vid=3&sid=b124f1d8-5e32-4a58-9563-9ea73872e7bf%40redis>
- [15]. Imbernón, F. (2020). Personal, Professional and Institutional Development and Teacher Training. Some trends for the 21st century. *Curriculum Journal*, 33, 49–67. <https://doi.org/10.25145/j.qurricul.2020.33.04>
- [16]. Maboya, M., Jita, L., & Chimbi, G. (2022). Reaping the Rewards of Professional Development: Evidence from Mathematics Teachers' Pedagogical Practices. *International Journal of Instruction*, 15(1), 873–890. <https://doi.org/10.29333/iji.2022.15150a>
- [17]. Makovec, D. (2018). The teacher's role and professional development. *International Journal of Cognitive Research in Science, Engineering and Education*, 6(2), 33–45. <https://doi.org/10.5937/ijcrsee1802033M>
- [18]. Matranga, A., & Silverman, J. (2022). An emerging community in online mathematics teacher professional development: an interactional perspective. *Journal of Mathematics Teacher Education*, 25(1), 63–89. <https://doi.org/10.1007/s10857-020-09480-2>
- [19]. Meesuk, P., Wongrugsa, A., & Wangkaewhiran, T. (2021). Sustainable Teacher Professional Development Through Professional Learning Community: PLC. *Journal of Teacher Education for Sustainability*, 23(2), 30–44. <https://doi.org/10.2478/jtes-2021-0015>
- [20]. Minedu. (2014). Framework for Good Teacher Performance (Ministry of Education (ed.)). <http://www.minedu.gob.pe/pdf/ed/marco-de-buen-desempeno-docente.pdf>
- [21]. Orellana-Fernández, R., Merellano-Navarro, E., & Almonacid-Fierro, A. (2018). Good university professor: Perspective of career management staff and of the teaching groups themselves. *Revista Electrónica Educare*, 22(2), 1–27. <https://doi.org/10.15359/ree.22-2.6>
- [22]. Organisation for Economic Co-operation and Development. (2018). TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners: Vol. I (TALIS (ed.)). OECD. <https://doi.org/10.1787/1d0bc92a-en>
- [23]. Porras, H. (2020). Construction and Validation of Questionnaires on Reflective Practice and Challenges, 11(1), 48–61. <https://doi.org/10.37711/desafios.2020.11.1.141>
- [24]. Ríos, R. (2019). The Education System and Teacher Education Policies in Latin America: A Common Challenge (pp. 100–109). Training routes: internships and experiences. <https://revistas.sena.edu.co/index.php/rform/article/view/3320/4017>
- [25]. Silva, I. (2007). Conditions and contexts around teacher professional development produced through action research. Pontificia Universidad Católica de Chile.
- [26]. Sims, S., & Fletcher-Wood, H. (2021). Identifying the characteristics of effective teacher professional development: a critical review. *School Effectiveness and School Improvement*, 32(1), 47–63. <https://doi.org/10.1080/09243453.2020.1772841>
- [27]. Tican, S., & Dinçman, B. (2022). Professional development of turkish preschool teachers during summer holidays. *International Online Journal of Education and Teaching*, 9(1), 361–396. <https://eds.s.ebscohost.com/eds/pdfviewer/pdfviewer?vid=6&sid=ec064b0d-481a-46dd-8c3f-6df959a38ed1%40redis>
- [28]. UNESCO. (2017). A Look at the Teaching Profession in Peru: Future Teachers, In-Service Teachers, and Teacher Educators (First ed.). <https://repositorio.minedu.gob.pe/handle/20.500.12799/5711>
- [29]. UNESCO, I. (2019). Teacher Career Reforms: Learning from Experience. IIEP UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000375605>
- [30]. Vargas, S., Narea, M., & Torres-Iribarra, D. (2021). Epistemological beliefs in teachers and their relation to professional development from the point of view of the valuation of the profession. *Psykhe*, 30(2), 1–18. <https://doi.org/10.7764/psykhe.2019.21809>