

Maria Camila Oberst

**EMPOWERING TEACHERS THROUGH THE TRANSFORMATION OF THEIR
PROFESSIONAL DEVELOPMENT PROGRAMS**

Understanding Argentinean Teachers' Needs & Challenges to Effectively Support them to Meet
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ABSTRACT

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The presented thesis is the culmination of a research project conducted as part of the Master's in Education Entrepreneurship at the Oulu University of Applied Sciences. Its central purpose is to understand the needs and challenges teachers in high socio-economic, private urban secondary-level educational settings in Buenos Aires (Argentina) are facing today, to identify factors that will support the development of solutions, empowering teachers towards the overall benefit of their students' learning path.

Both questionnaires and interviews were conducted to gather the viewpoints of school directors and teachers in the targeted schools. Relevant background research on learning theories, 21st century education standards, the current Argentinean educational landscape as well as studies on professional development around the world, has been conducted to support the discussion and conclusions of this thesis.

By drawing on the surveys' findings and on other background material collected, it is now clearer what teachers' challenges and needs are, highlighting the gap between the expectation of them teaching for the 21st century and the training they receive to do so. Teachers are being challenged by the fast-pacing changes that the teaching practice is experiencing in their communities and how their schools (as employers) are attending to these changes, while also confronting the variations in the needs their students have towards their uncertain workforce future. Teachers conclude they need MORE and HIGHER QUALITY professional development opportunities: more high-quality training, more planning, training and reflection time, more effective workshops, more personalized feedback, more coaching opportunities, and more collaboration between themselves.

Keywords:

Teacher Professional Development, Andragogy, 21st Century Skills, Experiential Learning, Argentina

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2 INTRODUCTION

Formal education in Argentina has suffered changes in the last three decades due to the expansion of its mandatory characteristic and the increase in socio-economic inequality and poverty in the country, resulting in a decrease of its quality (Rivas, 2010, p. 25). Moreover, the impact of the development of new technologies and media which are incorporated in the educational practice worldwide, has also impacted the quality of Argentinean formal education, which when not being able to keep pace with those changes, became obsolete (Rivas, 2010, p. 25). Gradually, innovations are beginning to emerge as teachers, students and other members of the educational community begin to raise their voices urging for a change. The government is becoming more committed to bringing about some of these demanded changes by importing international ideas and looking towards more effectively spending the money invested in the education sector. Hopefully, these will develop as fast as they are needed.

In 2016, the National Ministry of Education, alongside with the 24 regional ministers, signed the *Plan Estratégico Nacional 2016-2021 “Argentina Enseña y Aprende” (Strategic National Plan: Argentina Teach and Learn)*, which focuses in introducing a 21st century education by following four main pillars: 1) Learning concepts and essential skills; 2) Teacher training, professional development and quality teaching; 3) Educational planning and management; and 4) Integrated educational community. The plan intends to be adapted to each region’s context in order to be adequately implemented. Schools are beginning to line up towards the implementation of these changes, delivering many new ideas and projects for teachers to carry out inside their classrooms and expecting them to do so. The question is, *are Argentinean teachers capable of leading students to a 21st century education? Do they have the knowledge and skills to provide this type of education? What are their needs and challenges? How effectively are they being prepared to be students’ guide for what an uncertain future will bring?*

The present research thesis intends to be of social significance, as it reflects on the specific needs and challenges teachers are facing *today* in their schools and *how* these may be overcome. It is centered on understanding *how* teachers at secondary-level, high socio-economic urban private schools in Buenos Aires, Argentina, that are said to ‘teach for excellence’, are being prepared and assisted to lead their students towards a 21st century education. As an Argentinean and a teacher myself, who previously struggled in my practice in similar schools, I look to interpret those needs

and challenges, compare schools' current professional development (PD) programs with other international PD Programs, to later suggest how local ones might be transformed to effectively support teachers.

The thesis justifies the imminent *need* to empower teachers as facilitators of learning and advocates for improvements in their professional development by adequately addressing the needs and challenges teachers are facing.

3 LITERATURE REVIEW

In order to better understand the current situation in the targeted schools and provide insight on to how to effectively support teachers through the transformation of their PD programs, a thorough literature review was conducted which focused on teacher professional development concepts, adult learning theories, 21st century education definition and on understanding Argentina's education system's reality. The variety of national and international reports, journals, research papers and articles reviewed, addresses the mentioned topics and are fundamental for this research project. This is due to their significant contribution on the definition of PD best practices that need to be integrated into teachers' PD programs in order to effectively address the needs and challenges teachers are facing as students' guides in their learning endeavor.

3.1 Argentina's Education reality in the 21st Century

The thesis intention is to address real, contemporary problems that are currently faced by teachers within Argentina's education system. In 2016, the National Ministry of Education, alongside with the 24 regional ministers, presented the *Plan Estratégico Nacional 2016-2021 "Argentina Enseña y Aprende"* (*Strategic National Plan: Argentina Teach and Learn*). This new plan intends to introduce a 21st century education in Argentina by establishing four main core areas of action as well as three crosscutting axes to be implemented in all schools. The core areas are: 1) Learning concepts and essential skills; 2) Teacher training, professional development and quality teaching; 3) Educational planning and management; and 4) Integrated educational community. The three axes are: 1) Technology and Innovation, 2) Context focused Politics, and 3) Information and Evaluation.

Alongside with this plan, the newly elected government in Argentina presented a plan to be completed by 2021 for Teacher Training: "*Plan Nacional de Formación docente 2016-2021*" (by Ministerio de Educación y Deportes, 2016). The plan intends to provide an effective initial teacher training program for teachers as well as continuous education. It looks to achieve educational justice, teacher appreciation renewal, practice focused on specific challenges, and renewal of teaching methods, such as the incorporation of new technologies. Though no specific updates have been presented on how the government is measuring the progress of such plan, there are new initiatives such as the Program on Leadership and Innovation in Education (PLIE), a program

designed by Varkey Foundation in Argentina (VFA) in collaboration with the National Ministry of Education. Teachers can subscribe to a variety of courses which supports their professional development. Relevant to consider is that in 2019 there will be new presidential elections which may interfere, hopefully not, with the continuation of the plan.

On January 2017, the Regional Bureau for Education in Latin America and the Caribbean (OREALC/UNESCO Santiago) organized the Meeting of Ministers of Education of Latin America and the Caribbean “*E2030: Education and Skills for the 21st century*”. Education authorities present adopted the *Buenos Aires Declaration*, in which they acknowledged progress in the region’s education systems and reaffirmed their commitment to fulfill UN Sustainable Development Goal No 4: “*Ensure inclusive, equitable and quality education and promote lifelong learning opportunities for all*”, considering each country’s context and circumstances. In line with this present commitment, and the Strategic Plan previously mentioned, Argentina recognized the need for a 21st century education and began focusing on introducing the development of certain skills into the national curriculum to support the students’ integral growth in this 21st century.

A definition of what a *21st century education* entails and what *21st century skills* are is essential to stress the need for leaving behind obsolete teaching and learning approaches and embracing new ones that connect knowledge to the contexts in which it will be applied. The International Bureau of Education at UNESCO (adapted from Lai & Viering, 2012) defines 21st century skills as:

“An overarching concept for the knowledge, skills and attitudes citizens need to be able to fully participate in and contribute to the knowledge society. This need is mostly attributed to the changes in society, and more particularly, to the rapid development of technology and its impact on the way people live, work and learn. While in the industrial society the main focus of education was to contribute to the development of factual and procedural knowledge, in the information or knowledge society the development of conceptual and metacognitive knowledge is increasingly considered important.” (IBE UNESCO, n.d.)

The frameworks for 21st century skills vary among countries and organizations, but a common agreement exist. Initiatives include that of the OECD Learning 2030 Framework, Partnership for 21st skills (USA) and that of Cisco/Intel/Microsoft *Assessments and Teaching of 21st century skills project* (ATC21S), among others. For the purpose of this thesis, ATC21S’s definition of 21st century

skills will be followed, since it is the one adopted by Cambridge University, which has a strong presence among the targeted schools of this thesis. ATC21S defined ten 21st century skills into four broad categories (Binkley et al., 2012, p.17-66):

- *Ways of Thinking*: Creativity and Innovation; Critical Thinking, Problem Solving, Decision-making; Learning to learn/metacognition – (Knowledge)
- *Tools for working*: Information Literacy; Information & Communication Technology (ICT) Literacy – (Skills)
- *Ways of working*: Communication; Collaboration – (Attitudes)
- *Ways of living in the world*: Citizenship; Life & Career; Personal & social responsibility – (Values & Ethics)

Argentina's National Ministry of Education and Sports, along with the Provincial Ministries, and within the framework set by the "*National Strategic Plan Argentina Teach and Learn*", elaborated a national list of the skills they considered are essential for students to develop throughout mandatory education and which are to be included in the national curriculum. The agreement on the skills included in this list, is a result of several meetings hosted by the Secretary for Educational Innovation and Quality, within the Learning Improvement Federal Network, in which education authorities and representatives discussed the importance of organizing the curriculum, teaching and evaluation methods while taking into consideration what other countries in the region and the world are doing regarding these topics.

The six general skills are: *Critical Thinking, Problem Solving, Learning to Learn, Collaborative Work, Communication Skills and Responsibility & Commitment*. These are interrelated and depend upon each other, while also connecting to Digital Competency Skills. They are included as the framework for curriculum design, as they contribute to a more integral education. The skills are now included as part of the provincial curriculums that are implemented in schools. This thesis' targeted schools comply with such curricula also following the set of skills recommended by Cambridge University mentioned above.

By 2017, Argentina's National Direction of Educational Information and Statistics published the report "*Sistema Educativo Nacional: Informe Estadístico (National Education System: Statistics Report)*", which provides a strong clarification on what are the contemporary statistics regarding education's principal features, data that is fundamental for future educational changes and for and adequate implementation of the plan for a 21st century education the government presented. This

report also sets a foundation for the questions included in the questionnaire study conducted in this thesis. Some of the principal features considered in the report are:

- student and teachers' ratios: average of 20 students per teacher in Secondary education (2015);
- amount and characteristics of private and public settings;
- students' learning path: average graduation rate 45.4% (2014);
- investment in education: 6.1% of GDP in 2015; and
- access to internet: available to 63% of public schools and 90.5% of private schools.

Recently, Varkey Foundation published a report on Global Teacher Status Index 2018, based on a survey carried out in 35 countries around the world. Argentina is part of this research survey, which sought to identify the level of respect for teachers and their social standing in each country. The survey's outcome establishes society's perception on their country's education system, and more specifically, teachers. Overall, the findings for the 2018 Index shows a correlation between teacher status and student outcomes, being that higher perception of this profession, and reward, lead to greater student performance in that country. In Argentina, there is a general mistrust of what the educational system, and their primary officers, can achieve, and this may lead to an overall lower performance. A summary of the main findings in Argentina is described below:

- Argentina's education system rank is 5.4/10
 - Pupils respect of teachers: 15% of people believe they are respected by students
 - Society's respect of teachers: ranked 7th out of 14 professions, 74% believe teacher are not respected by society
 - Average teachers' working hours: 43.7 hours a week
- Global teacher Status Index: 31/35

3.2 Teacher Professional Development and Adult Learning Theories

Teacher professional development has been defined in many ways throughout the years and often differ among countries. The present thesis subscribes to Avalos' definition of professional development; this one states that the goal of teachers' PD is ultimately for the students' benefit.

"[...] professional development is about teachers learning, learning how to learn, and transforming their knowledge into practice for the benefit of their students' growth. Teacher professional learning is a complex process, which

requires cognitive and emotional involvement of teachers individually and collectively, the capacity and willingness to examine where each one stands in terms of convictions and beliefs and the perusal and enactment of appropriate alternatives for improvement or change.” (Avalos, 2011, p. 10)

Understanding teachers' needs and challenges, looking for ways to improve their PD Programs and empowering them, has the imminent mission of benefiting those who are served by teachers, the students. Teachers need to be up to date with their skills and practices to support students in the best way possible, to be their guide and promote students learning towards an uncertain future in this 21st century.

As stated by Avalos (2011), teachers' learning is a complex process that needs to be addressed as such, identifying all the necessary characteristics it should include. Teachers are adults, and as such, their learning practices need to be coherent with those of adult learning theory or Andragogy. The four principles provided by Knowles (1968), father of Andragogy, based on five assumptions, provide a clear foundation for PD programs to be as effective and as teacher- focused as they should be. The four principles are:

1. Adults need to be involved in the planning and development of the instruction
2. Experience is basis for the learning activity
3. Adults have more interest in learning what has an immediate relevance and impact to their job or personal life
4. Adult learning is rather problem centered than memorizing concepts.

A combination and actualization of this theory and the ways in which it is taken into practice must be considered for the later discussion of this thesis findings. Kolb's Experiential Learning stages and cycle (1984) also helps bring light into how current PD programs may be evaluated and reflected upon, to design new ones which are more fitted to the teachers as learners, also stressing the idea of including them as those who reflect upon the current programs and actively participate in them. Kolb defines learning as “the process whereby knowledge is created through the transformation of experience” (Kolb 1984, p.38). The four stages he introduces as part of the learning experience are:

1. Concrete Experience: doing/ having an experience - feeling
2. Reflective Observation: reviewing/ reflecting on the experience - watching
3. Abstract Conceptualization: concluding/ learning from the experience - thinking
4. Active Experimentation: planning/ trying out what you have learnt - doing

The cycle describes the learning process as a spiral as opposed to a linear, traditional transition of information used in other learning models, where the learner is a passive recipient of information. It begins with the learner having an experience and finishes with them actively experimenting with the knowledge gained. His work will be taken into consideration when analyzing this thesis's findings, since it is of importance that teachers as learners are the ones who reflect upon their PD programs. For example; through the surveys conducted in this research, teachers were invited to reflect upon such programs therefore actively participating in their learning. Teachers within this cycle are both receivers of information during PD sessions and creators of information.

Teachers' PD programs need to be aligned then to the mentioned theories, being that teachers are in the role of the student within these programs. In the report "*Effective Teacher Professional Development*" produced by Darling-Hammond, Hylar and Gardner (2017), the authors look to answer the question of what constitutes effective professional development. They review 35 methodologically rigorous studies which demonstrates the link between teacher PD, teaching practices, and student outcomes. A list of seven features was compiled that are common among the best practices for PD drawn from an analysis of their set of studies (Darling-Hammond, Hylar and Gardner, 2017, p.5-6). These features are:

1. Models of Effective Practice: PD must provide teachers with modeling of what best practices look like.
2. Is Content Focused: PD must focus on teaching strategies that are specific to their curriculum content and classroom context.
3. Incorporates Active Learning: PD must engage teachers directly in designing and trying out teaching strategies, providing an opportunity for them to learn in the same style of learning they are designing for their students. It provides deeply embedded, highly contextualized professional learning.
4. Offers Feedback and Reflection: PD must provide time for teachers to reflect upon practices, receive feedback and make the needed changes to their practice.
5. Provides Coaching and Expert Support: PD must involve the sharing of expertise about content and evidence-based practices, focusing on each teacher's needs.
6. Supports Collaboration: PD must create a space for teachers to share ideas and collaborate in their learning. Teachers can create communities that positively impacts their learning environments.

7. Is of Sustained Duration: PD must provide teachers with the necessary time for them to learn, practice, implement and reflect on previous experiences. These best practices are relevant to the thesis by acting as a foundation for questionnaire design and later analysis of how school's PD programs need to be transformed.

An effective transformation of teachers' PD programs entails the understanding of their needs and challenges regarding their work as learning facilitators, and an adequate contextualization of this literature review findings. Only then teachers will be empowered.

4 METHODOLOGY

The research conducted is qualitative in nature and has mainly an exploratory goal. It focuses on *how* teachers are being trained and assisted to lead students towards a 21st century education through the analysis of their responses to surveys on current needs and challenges they face and their perception on ongoing PD programs. If these are understood and adequately interpreted and addressed, then PD programs may be transformed to effectively support teachers, empowering them as students' learning guides. The research targets teachers at a specific cross-section of the Argentinean formal education settings. Teachers targeted are currently working in three different high socio-economic secondary-level urban private schools in northern Buenos Aires, Argentina. (More information in *4.1. Questionnaire and Interviews Target Group*)

The main data collection methods employed were questionnaire and interviews. The first one was presented to teachers at different schools in the targeted area, while interviews were conducted to those same school's administrators to support the continuity of the study. Surveys were collected throughout November and December 2018, at the end of Argentina's academic year, this being an optimum time for educators and directors to reflect upon the challenges and needs faced throughout the past year. The method was chosen as it supports the gathering of data in a systematic way, allowing for a non-experimental, cross-sectional study, conducted from the USA over phone and video calls (interviews) and through WhatsApp (questionnaire). The total amount of interviews conducted is three, one to each targeted school administrator. The total amount of teachers who received the questionnaire is 103; 30 at School #1, 20 at School #2 and 53 at School #3.

The interpretation of the data collected together with the literature review conducted will look to suggest *what* needs to be taken into consideration when designing PD programs that support teachers in a more effective way in the targeted schools.

4.1 Questionnaire and Interviews Target Groups

As mentioned, the thesis targets teachers at a specific cross-section of the Argentinean formal education settings. Formal education in Argentina is offered in public and private, both rural and

urban establishments. The last survey conducted in 2015 determines the number of such establishments and the percentage of secondary-level institutions (Ministerio de Educacion y Deportes et al, p.7, 2015). Numbers are as follows:

- Public rural = 855.556 of which 31,8% are secondary-level institutions
- Private rural = 43.000 of which 61,5% are secondary-level institutions
- Public urban = 7.020.667 of which 36,1% are secondary-level institutions
- Private urban = 3.214.859 of which 34,6% are secondary-level institutions

There is a broad number of educational institutions in the country, which vary both in social and economic characteristics serving all the Argentinean communities. As shown in the last PISA results and then again at local examination *Aprender 2017* a relationship between social background and educational performance was established for Argentina's schools. In the report "*Aprender 2017: Que nos dicen los resultados*" (Learning 2017: What results mean) (Cardini & Sanchez, 2017) the authors refer to the educational discrepancy between the different regions in the country and how the government is challenged to narrow down these gaps. For example, in a test on Social Sciences, 22.5% of children from low-resources areas did not accomplish the expected level, in contrast of only 4.5% of children from high socio-economic areas.

This thesis research targets a specific section within the formal education institutions. The schools belonging to this section all share similar characteristics of being private, urban, having secondary-level grades and serving a high socio-economic population in northern Buenos Aires, Argentina. The three schools chosen were selected due to the mentioned characteristics and the writers' friendship with some of the teachers working in these schools, who through different informal conversations made it clear they were struggling with their teaching practice and showed interest in receiving suggestions for change in their professional development opportunities.

The targeted schools belong to a very specific cross-section of Argentinean society and therefore the conclusions made from this study are to be considered specific to these targeted teachers. Further research needs to be conducted to determine if similar conclusions may be drawn from targeting other regions of the country and public schools.

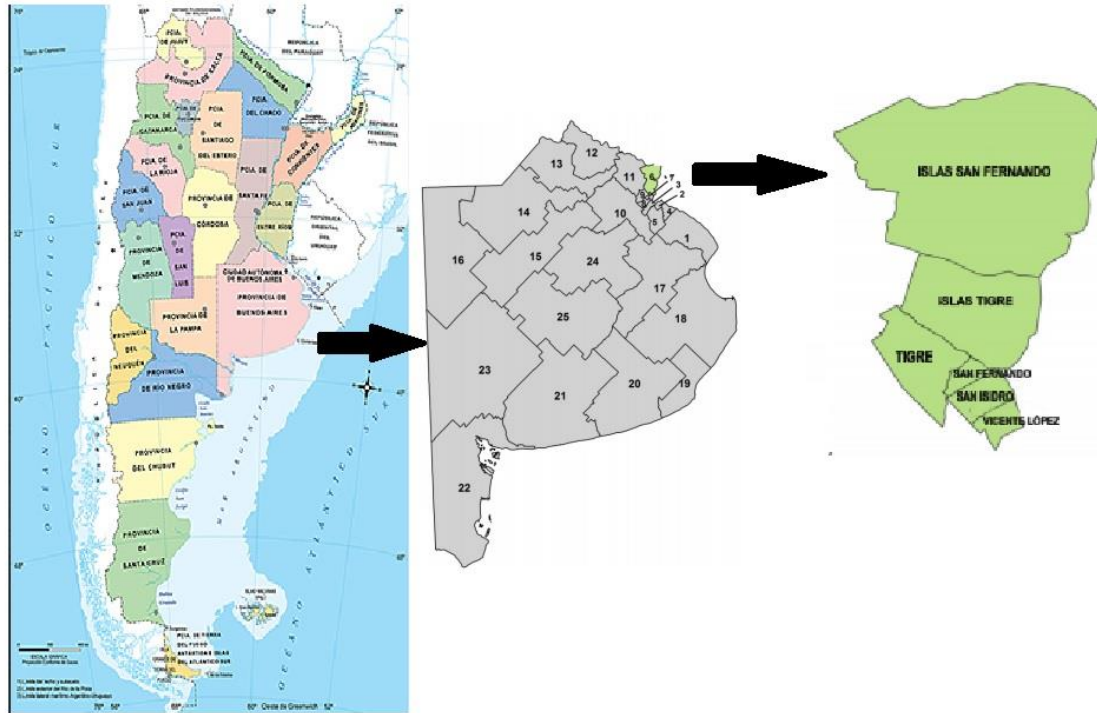


Figure 1. Geographical representation of targeted area.

4.2 Design

4.2.1 Interviews

Interviews were conducted through phone calls and video calls with school principals and representatives in the targeted schools. A list of questions was sent in advance to those interviewed to serve as a guide for the interview. The list may be found in Appendix 1.

The first questions focused on how teachers in the targeted school are being currently trained, whether they have an established PD program or how they assist teachers in their school, if they developed such programs by themselves or if they work alongside with third party companies. The intention was to learn about what type of PD opportunities schools provide to their teachers and then to be taken into consideration when analyzing teachers' responses.

The following questions inquired about their perception on teachers' and students' needs and challenges and what their efforts towards addressing those are. Following these, questions about the "perfect" PD program were presented. The intention was to gain insight into any existing connection between existing PD opportunities and the needs and challenges of teachers and

students, as well as to understand what school directors would like to have in their schools, the features they would focus on if they had unlimited resources.

4.2.2 Questionnaires

The questionnaire was designed in Spanish (teachers' native language), as a Google Form and shared via WhatsApp by three on-site teachers to better reach their colleagues and facilitate their participation in the survey. The on-site teachers are the three friends of this thesis author who showed interest in participating in the study. After a phone call discussion with the three of them, a guideline to address the questionnaire was established and their roles as teachers' referents determined. They then provided teachers with a short introduction and explanation of the questionnaire's goal and how the information collected would be use. Adequate response rate for the data collected was secured by them acting as questionnaire representatives, resulting in a 36.9% response rate. Questions were developed taking into consideration the literature review conducted and intend to provide a thorough understanding of teachers' needs, challenges, perception of their PD programs as well as what they want these programs to be like.

The original questionnaire used, in its Spanish version, can be found in Appendix 2 and its translation in Appendix 3. Questions were divided into four sections. The first one provides a short introduction to the survey. Section No 2 focuses on teachers' needs and challenges regarding their work in school, providing them with a list of options to choose from, and also an open space for them to write. Teachers are additionally asked about their perception on what are their students' needs regarding their learning experience. A list of options is provided that was retrieved from OECD report on *"21st Century Learning: Research, Innovation and Policy Directions"*.

Section No 3 inquiries about teachers PD. A definition of what the term entails according to Avalos (2011) is provided. Firstly, teachers are asked about their preparedness to teach in the 21st century and how much time would they spare for their own professional development. Following, teachers are asked about current PD opportunities and their opinion on those. The two final questions are focused on Darling Hammond, Hylar & Gardner (2017) list of features that are to be present for effective teacher PD. Teachers are asked to choose what they considered to be essential and then select just one as the 'most important' and provide a reason for their choice. The intention is to gain insight on what opportunities teachers want and what are their priorities regarding these opportunities.

The last section attempts to gather personal data on the specific group that answered the survey in order to understand the characteristics of the group.

5 FINDINGS

The interviews' and questionnaire's intentions were to provide insight into what are the *needs* and *challenges* teachers in the targeted private schools in Buenos Aires, Argentina are currently facing as they are expected to teach by the 21st century standards (national curriculum) and *their perception on current PD opportunities* offered in the schools. Teachers' and school directors' answers not only defined what these needs and challenges are but through the description of current PD programs that are underway in their schools, they clarified *how teachers are being trained and prepared to be students' guide for their uncertain future*.

5.1 Interview Findings

The findings resulting from the phone and video call interviews conducted through November - December 2018 are described below. One director of each school targeted (three in total) was interviewed to gather additional insight on the teacher's reality within the school regarding their PD opportunities, needs and challenges.

All targeted schools offer some level of PD opportunity to teachers. At the time of the interview, only School #2 specified having a developed program for teachers' PD. Teachers attend four sessions throughout the year in which different concepts are reviewed according to the necessities present in the school. The director explained that "*The idea was born when they saw the children's necessity for differentiation and the need to change professor's mindset*". They began offering these sessions to address the challenges faced in the school. The other two schools refer to individual opportunities in which teachers were trained on different areas, often at the beginning and/or end of the school year. School #1 representative said: "*Up until now (Dec 2018), the PD offered in the school was very poor, the teachers wanted some kind of PD, but they would look for it on their own, they'd go to other sources*". She mentioned that for 2019 "*things will change, teachers will receive training in Project Based Learning at the beginning of the school year*".

In all schools, a 3rd party PD provider is contracted. Among those mentioned are ESSARP and Monserrat del Pozo. The latter consists of a three-year long program that is attended by a few numbers of representatives from the school. They then share their learnings with the rest of the teachers during those occasional sessions.

When asked about students' needs a common line of thinking was shared among the schools. Personalized learning, motivating and engaging learning opportunities and innovative practices were mentioned. Regarding teachers' needs, student appreciation was repeated by all three representatives. At School #1, teachers' need of more support was acknowledge as well as time to be spend in school for professional development purposes. The director in School #3 also mentioned that teachers required more time outside the classroom but inside the school. *"We are struggling with teachers working in more than one school and so having very tight schedules. This results in almost no time for planning and reflection inside the school"*. As mentioned before, the director in School #2 recognizes the needs of teachers and students and looks to address them through efficient PD opportunities. Such programs were not mentioned at the other two schools as a mean to address these needs and challenges.

5.2 Questionnaire Findings

The findings resulting from the questionnaire conducted in November - December 2018 are described below. As mentioned, the questionnaire was conducted in three schools that share similar characteristics, being all private learning settings attended by high social economic class students. Schools were chosen considering they are said to "teach for excellence" and often have the means to bring about innovations. In each school, one person was requested and assigned to deliver the questionnaire to teachers. The total response rate was of 36.9%

Questions 1 – 3 provide clear answers on what the needs and challenges teachers are facing today are. From these answers, their struggles are to be interpreted in order to be addressed directly in PD sessions potentially resulting in a more effective program. Questions 4-10 go over teachers' opinion on PD programs, both the current ones which may be or not offered in their schools as such, and the 'ideal' ones. By combining answers in each section, analyzing them and interpreting them, the question of how to empower teachers through the transformation of PD programs may be answered. Adding quality and accuracy to the design process of such programs results in better opportunities for teachers as guides for students' uncertain future.

Respondents' average age ranges between 31-40 years old and most of them, 68.4%, work only for one school. One fifth of the respondents work in two schools and 10.5% of teachers work in 3

or more schools. This information is important to produce a comprehensive PD program taking into consideration that teachers may not be in the school at the same time.

Regarding teachers' teaching experience (in years), a majority of 39.5% have between 11-20 years of practice. About one fifth of the teachers said to have more than 20 years of experience, while 5.3% mentioned being new, having less than one year. The remaining third of respondents said to have between 1 - 5 years (15.8% of total) and between 6-10 years of teaching experience (18.3% of total).

In the targeted schools, class sizes are normally between 26-30 students, as stated by more than three quarters of the teachers (76.3%). Significant fewer number of teachers, 7.9%, mentioned having more than 30 students in their class, while 13.2% stated having 20-25 students. Only 2.6% said they have less than 20.

Teachers questioned have all earned some education level. A minority has only graduated from High School. More than half of the teachers have attained at least a bachelor's degree, being that 21.1% of the total respondents graduated from a master's degree. One quarter of respondents' highest level of education attained is an associate degree (26.3%). None has completed a doctorate degree.

The following table presents a complete summary of respondents' personal data:

Table 1. Respondents' personal data

Age Range	Teaching Experience (years)	Students per class	Schools they work for	Highest education level attained:
- 23: 2.6%	-1: 5.3%	Less than 20: 2.6%	One School: 68.4%	High school graduate: 10.5%
24-30: 23.7%	1-5: 15.8%	20-25: 13.2%	2 Schools: 21.1%	Associate degree: 26.3%
31- 40: 42.1%	6-10: 18.3%	26-30: 76.3%	3 Schools: 7.9%	Bachelor's degree: 42.1%
41- 50: 18.4%	11-20: 39.5%	More than 30: 7.9%	4 Schools: 2.6%	Master's degree: 21.1%
51-60: 13.2%	21-25: 5.3%			
	+26: 15.8%			

Rather not say: 0%	Rather not say: 0%			Doctorate degree: 0% Other: 0%
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5.2.1 Teachers' needs regarding their work in school

Teachers were given a variety of options to choose from. They could select up to 5 needs out of a list of 14 + 'Other' option, only 86% of respondents selected as many. Multiple response analysis was used to measure the frequency of each *need* being selected.

More than half of the respondents (66%) say they need smaller number of students per class. Argentina's average of students-teacher ratio in the secondary level is 20 students per teacher (2017 National Education System Statistical Report), but in the targeted schools, most classes' size is between 26-30 students, as stated by 76.3% of the teachers.

The following most popular need selected by 53% of respondents is 'Training on new ways of teaching and learning'. Also selected were the need for time dedicated to training, receiving training on new technologies and being confident in their performance as a teacher. All these selected needs reflect a desire of broader and better PD programs which could address them.

Of all answers provided, 10% were allocated to receiving the expected appreciation by students, their parents or school directors, the highest one being appreciation provided by directors. Almost a quarter of respondents said they were lacking their supervisor's appreciation. Not receiving the expected acknowledgement is often linked to lower performance, therefore a very important issue to be addressed. Collaborating with other teachers and receiving feedback were also dominant within the selected needs, each reaching almost 40%.

Finally, among teachers' needs, time was also common, reaching almost 25% of the answers provided. Teachers state they need time for training, planning and researching. It was also interesting to read two other comments which include having "subject appropriate environment" and "new tools". This may be interpreted as teachers not having the necessary resources to perform as they would like to.

The two following figures reflect the complete answers provided which were summarized above. They describe the percentage out of the total amount of respondents that selected each need and the percentage out of the total amount of answers that was allocated to each need.

Respondent % - Teachers' needs regarding their work in school

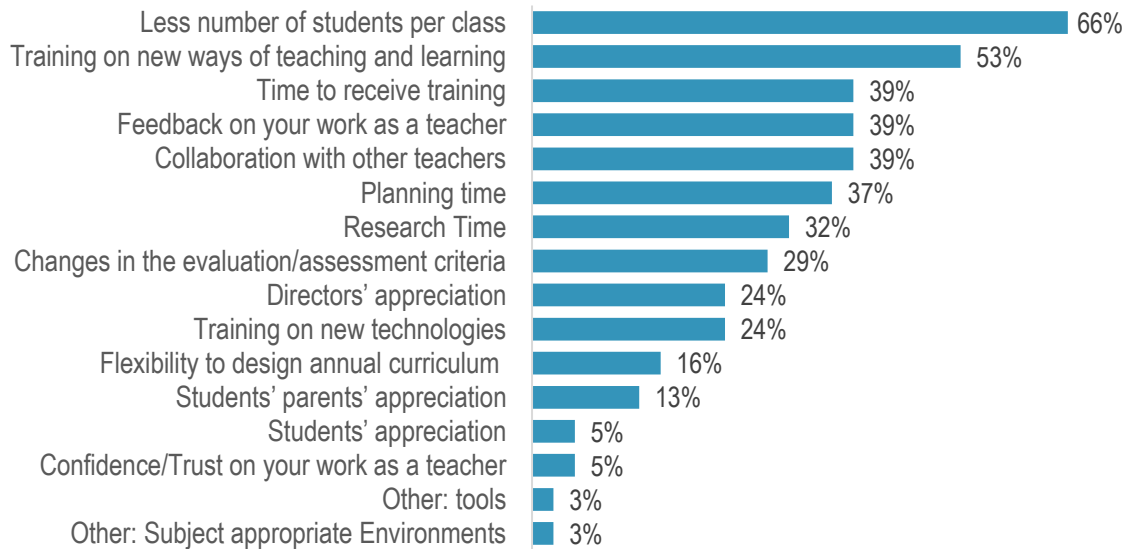


Figure 2. Teachers' needs regarding their work in school – Respondents percentage.

Answers % - Teachers' needs regarding their work in school

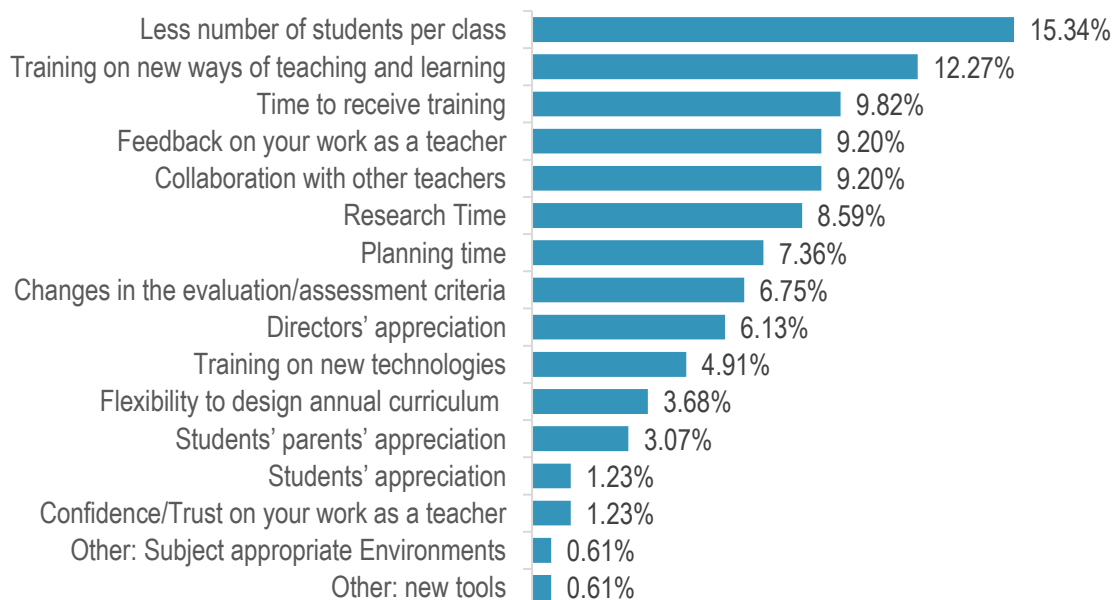


Figure 3. Teachers' needs regarding their work in school - Answers percentage.

5.2.2 Students' needs regarding their education in the school environment according to teachers

Teachers were then asked about their students' needs regarding their education in the school environment. Teachers closely follow students' learning, allowing them to clearly identify what these needs are. A list of 10 needs was provided for teachers to choose from, allowing them to select up to 5 needs. A total of 72% of respondents selected as many. Multiple response analysis was used to measure the frequency of each need being selected.

More than three quarters of the teachers consider the 'Collaborative Learning Approach' as one of students' needs. Agreement was also high on other learning approaches such as Skill Learning (68%), Personalized Learning (50%) and Context-Based Learning (39%). These are to be considered when defining the trainings teachers receive, meeting their needs as well as their students'.

More than half of the teachers (66%), consider that students should develop socio-emotional intelligence. The use of ICT in learning is also considered by 45% of the teachers to be among students' needs. Only 14% of teachers referred to students needing either memory based or standardized learning approaches. None considered standardized assessments to be one of their students' needs, which shows an overall trend towards modern learning and teaching methodologies.

Students' needs regarding school according to teachers

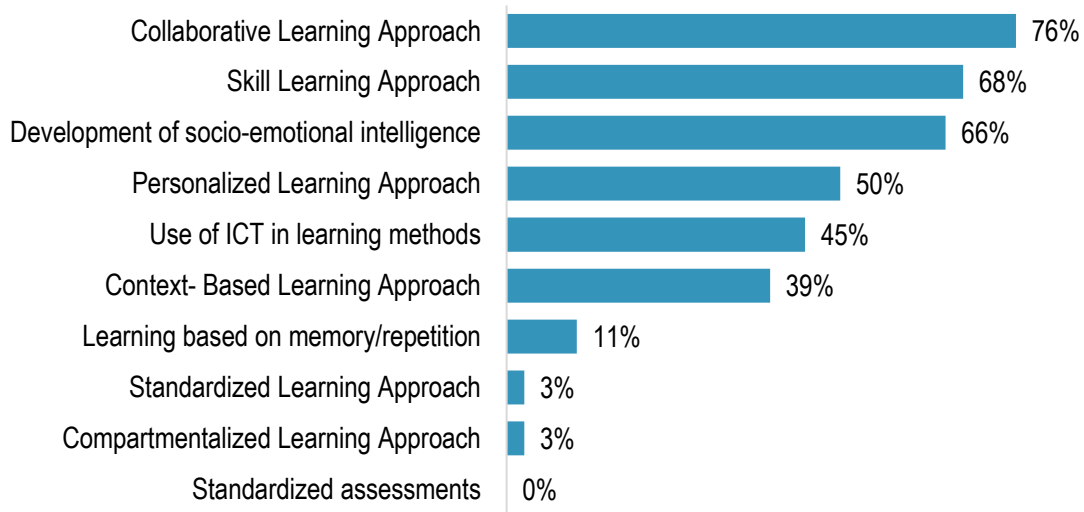


Figure 4. Students' needs in school according to teachers – Respondents percentage.

Students' needs regarding school according to teachers

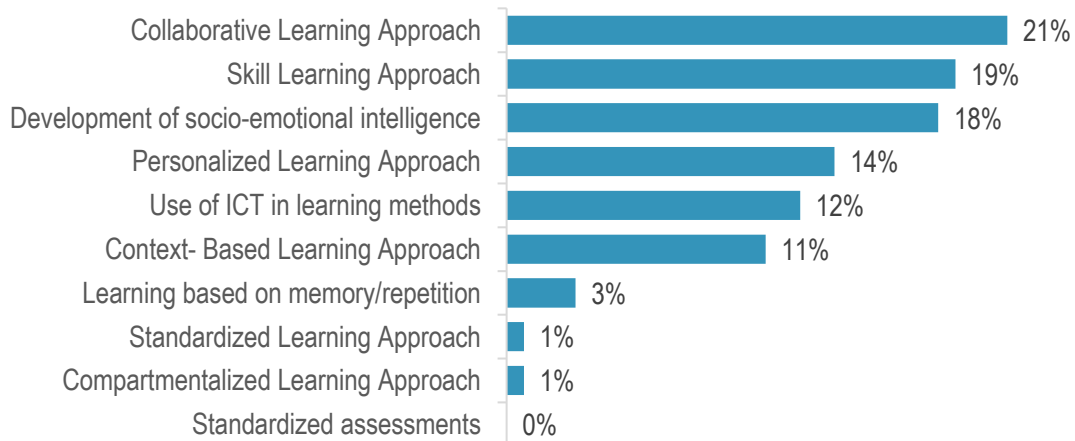


Figure 5. Students' needs in school according to teachers – Answers percentage.

5.2.3 Teachers' perception of their biggest challenge as a 21st century teacher

Teachers were provided with space to write what they considered to be the biggest challenge they faced as teachers in the 21st century. They were asked to write, allowing them the freedom of not being limited by a list of choices. The intention was for this answer to provide more insights into questions 1 and 2. In order to present the following data, raw information was interpreted and classified into 13 general challenges as shown in the bar graph. On average, half of the teachers did not limit themselves to describing one challenge but provided a description of two.

More than half of the teachers (53%) said they are struggling with students' motivation, keeping students engaged, provoking them to wanting to learn, being able to spark interest into their learning experiences. One teacher said her challenge was *"Finding that specific hook that will motivate students to want to learn and learn more"*. Lack of their capacity of fulfilling this need may be well related to their schools still following a standardized, traditional approach, as mentioned by another teacher who referred to *"motivate students to perform within the current educational system"* as a challenge. Following this line of thinking, teachers specifically mentioned having to teach in schools where a traditional education system is still well grounded as a challenge (13%). Teachers refer to a certain dichotomy between what they are expected to do towards a more progressive education and what they can do under that traditional school setting: *"There is incompatibility in proposals for significant and socio-emotional learning with standardized international exams"*

It is interesting to point out that a total of 42% of the teachers consider 21st century education (standards and skills) as a challenge. They described this challenge in different ways, enumerating the skills they want their students to learn, teaching methods they want to apply into their classrooms, as well as the confidence and training needed to be able to teach under this umbrella. One teacher explained the challenge as follows: *"Being capable of adequately responding to demands. The 21st century teacher needs to be innovative, know how to manage collaborative work, guide personalized learning and be able to deal with issues that are not related to pedagogical issues. This challenge requires a lot of training and support"*.

Other challenges include obtaining satisfactory results, not having enough time, training or support to *"Provide students with tools for their uncertain future"* and *"Adapting myself to students' contemporary needs"*. Furthermore, others referred to being capable of collaborating with other teachers, incorporating new technologies and competing with social media. This last one may be well related to keeping students engaged.

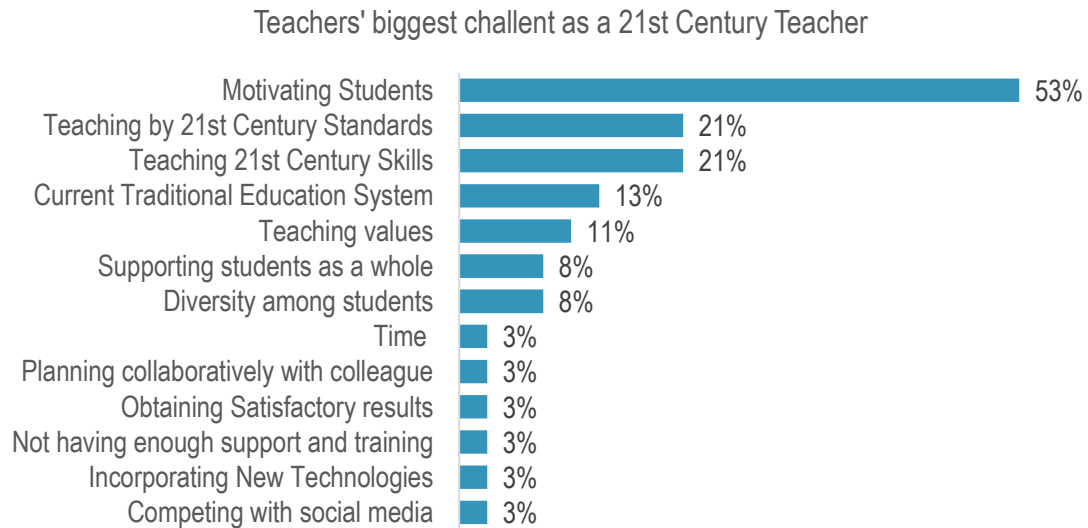


Figure 6. Teachers' perception of biggest challenge as a 21st Century teacher.

5.2.4 Teachers' perception on how ready they are to teach according to the needs of the 21st Century

After a definition of PD was presented, teachers were asked about their readiness to teach for the 21st century. A total of 39% of the teachers consider themselves to be prepared, setting themselves at the mid-point of the ranking provided. In addition, 16% considers to be well prepared and almost a third of all teachers said they were moderately prepared (32%). A very low percentage of the teachers said to be somewhat or not prepared at all (10% and 3% respectively).

Teachers' perception on their readiness to teach for the 21st Century

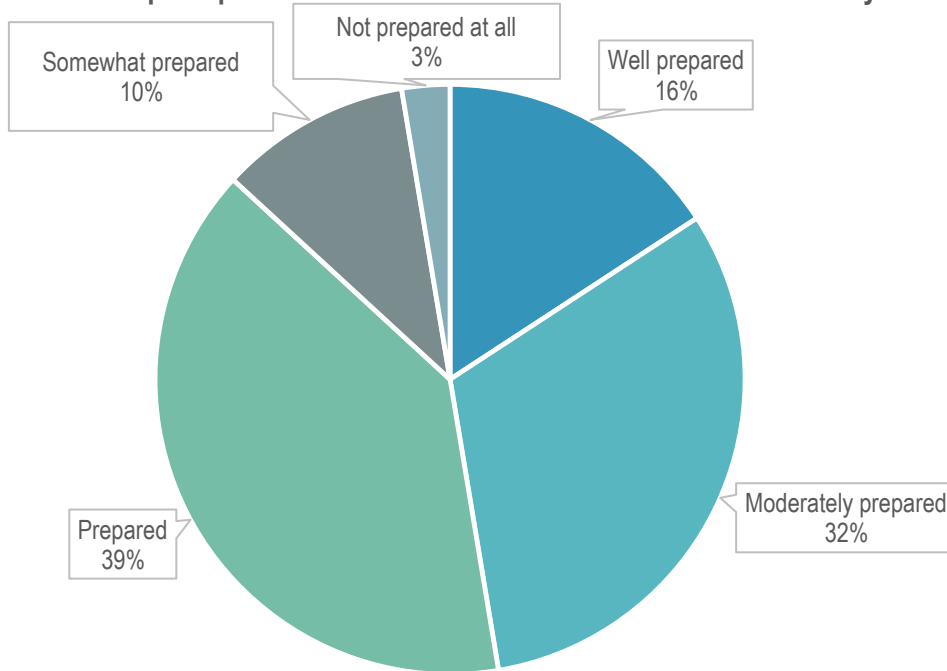


Figure 7. Teachers' perception on their readiness to teach for the 21st Century.

5.2.5 Type of PD opportunities teachers want to have

Teachers were invited to enumerate the overall type of PD opportunities they want to participate in. The question was broad enough for teachers to include what was relevant for them, from topics, to skills they would like to develop, to whether they prefer face to face sessions or not. Raw data was classified into 17 categories considering their similarities in order to provide a clearer scenario of what they are looking for.

Teachers enumerated different types of trainings they wanted as PD opportunities. These include training focused on specific content (13%), new ways of learning (8%), new technologies (8%) and on 21st century skills (8%). *"I want training on different aspects of education. They could be workshops, classes on specific content or suggested readings, with time to reflect and discuss on what was learnt". "I'd like to receive training from people who are currently inside the classroom too and therefore understand students' reality and classroom context"*. The most popular type of opportunity mentioned was cooperative work, one teacher clarified *"collaborative work to compare myself with others"*. This could be linked to having time for discussion and reflection among peers, reaching 21% of the answers. Teachers mentioned wanting this type of opportunity both with

colleagues as well as with teachers from other educational establishments, which also refers to them naming exchange programs (6%), interschool workshops (4%), observing classes and interdisciplinary workshops (4% of the answers each one).

Additionally, teachers also referred to time, extra pay and flexible hours, which are not necessarily opportunities, but important issues to be considered. For example, one respondent stated: *“Having time outside the classroom to spend in collaboration with other teachers and designing of my own classes”*.

Professional Development opportunities teachers want



Figure 8. Professional Development Opportunities teachers want.

5.2.6 Amount of time teachers would set aside for their own PD

On how much time teachers would set aside for their own PD, a majority of 47% said they would spend between 2 and 3 hours a week. Adding those who would spend even more, between 3-4 hours and more than 5 hours a week, the total percentage of those in this category reaches 69%. There is a total of almost a third of respondents (31%) that would not spend more than 30 minutes or an hour a week.

Amount of time teachers would set aside a week for their own PD

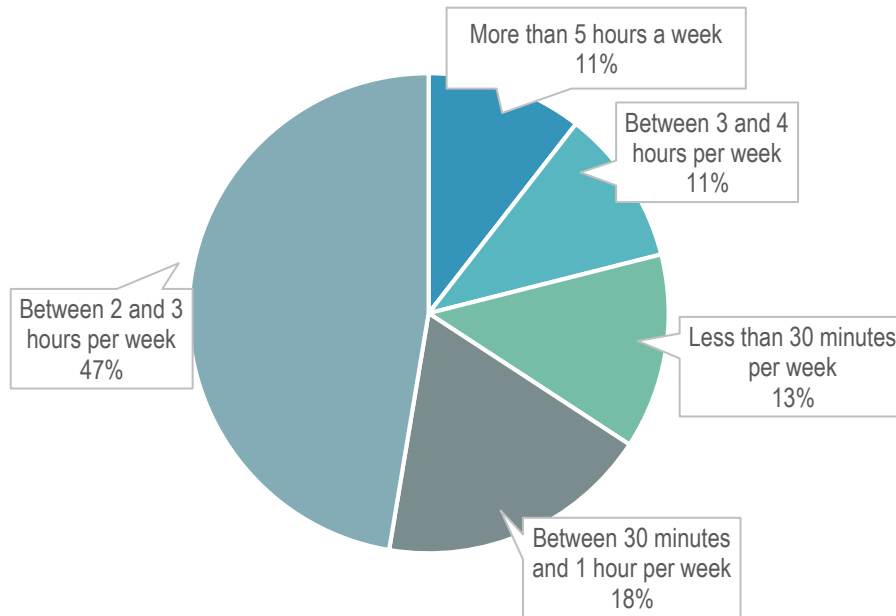


Figure 9. Amount of time teachers would set aside a week for their own PD.

5.2.7 PD opportunities that are currently being offered by teachers' employers

The question was asked to learn about current PD opportunities in the targeted schools. Answers were interpreted and classified into PD 'opportunity type' and 'frequency'. Half of the teachers said they only participate in one PD session at the beginning of the school year (45%) or at the end (5%). Some gave no specific answers by stating they participated in 'few' (9%) or 'periodic' (9%), but no number was assigned to what they meant by those words. On the contrary, 9% stated participating in 4 meetings throughout the year, while 5% have 2 hours per month assigned to their PD.

Regarding the type of PD opportunity, workshops, 3rd party provider's courses and optional courses and training sessions were the most mentioned. The answers provide insight on how teachers understand the term PD. There was not an exact consensus among the teachers working in the same establishment, which reflects a gap between what they as a group consider to be 'hours spend in professional development'. The 3rd party providers mentioned by teachers are ESSARP, Monserrat del Pozo, Private Universities and APDES.

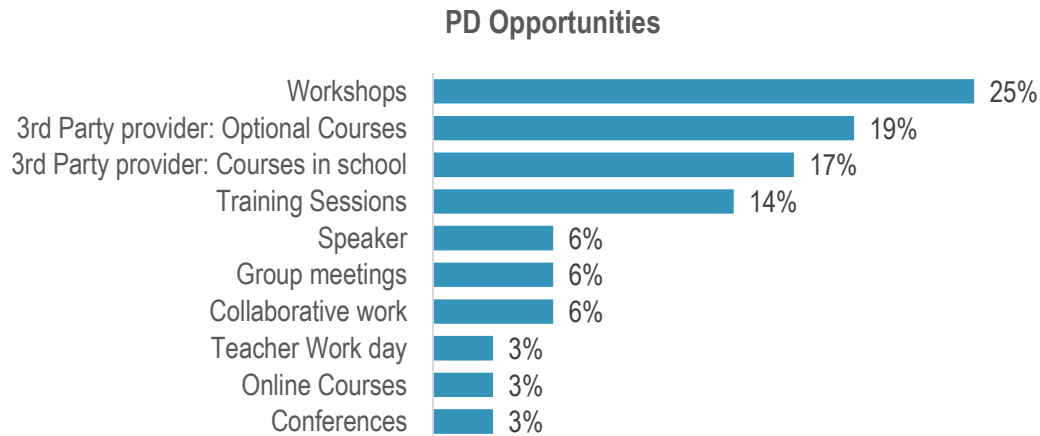


Figure 10. PD Opportunities at targeted schools.

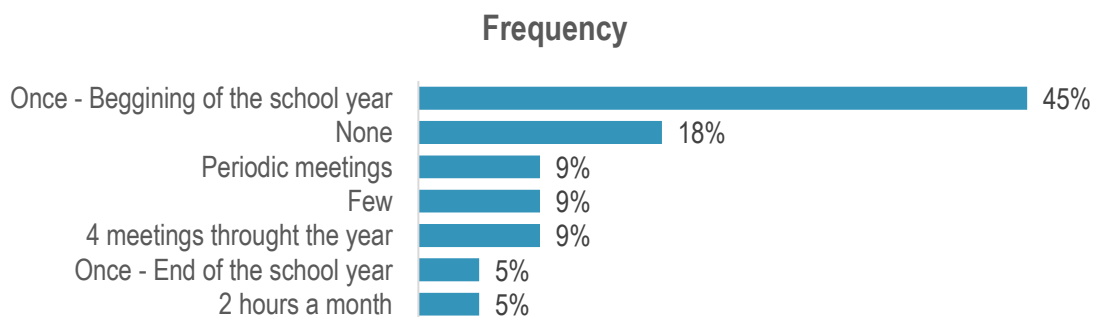


Figure 11. Frequency of PD Opportunities at targeted schools.

5.2.8 Teachers' opinion on PD opportunities offered by their employers

Teachers were asked for their opinion on existing PD opportunities offered in their schools. Answers were interpreted and classified as 'useful', 'very useful', 'irrelevant' and 'insufficient' according to the reasons provided. A great majority rated the PD opportunities as 'insufficient' (32%) or 'irrelevant' (39%). The reasons provided include opportunities being "scarce", "contents not being adaptable to schools' reality and methodology", nor "adequate to teachers' needs". "On many occasions they (trainings) do not correspond to what goes on inside the classroom". Some teachers said not having any at all: "It would be good to have some". Teachers also said that the sessions are not content related, "poor and basic", "very simple and with no follow up", and not paid accordingly to the extra hours spent at training and that as not all teachers were invited to participate, the training was not equivalent for them all: "Not all teachers are able to participate though because often these are outside school hours and those hours are not paid."

On the positive side, the rest of the respondents consider the opportunities to be ‘useful’ (18%) or ‘very useful’ (11%). These teachers stated that the workshop they participate in at the beginning of the school year, or for some at the end, were “good” sessions, also that speakers invited “were often very interesting”. One of the teachers said: “they are pretty good since they help me to learn about specific needs. For example: online course on gender ideology, on sex education, a communication course. All of them arose from a classroom demand and a lack of training from me. After these trainings I feel a bit more confident to address some issues.”

Opinion on current PD opportunities offered by employers

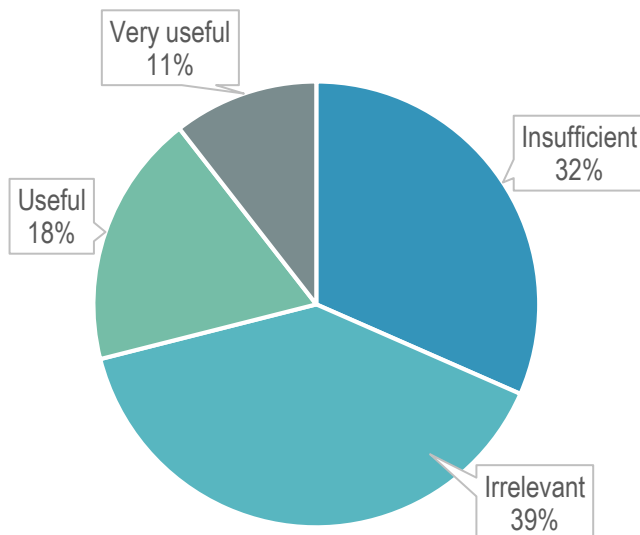


Figure 12. Teachers' opinion on current PD opportunities offered by their employers.

5.2.9 Teachers' selection of essential characteristics of a PD program

A list of characteristics of a PD program was provided to teachers for them to select those they considered to be ‘essential’ for effective PD. The list corresponds to the Learning Policy Institute’s 2017 Report on *Effective Teacher Professional Development* (Darling-Hammond, Hylar & Gardner 2017). Teachers were able to select as many as wanted, electing an average of 3.9 characteristics each.

The chart reflects the percentage of how many times out of the maximum amount each characteristic was selected. All features were chosen by almost over a quarter of the respondents

as an *effective characteristic*, leaving none unselected. Therefore, it confirms as the report states, that these are clearly features to be taken into consideration when designing a program. More than three quarters of respondents selected ‘Uses models of good practice’. Following, 71% of teachers agreed on ‘Supports collaboration’ as an essential characteristic. More than half of respondents (66%) included ‘incorporates active learning’. ‘Feedback & reflection’ and ‘coaching & expert support’ were also popular ones, selected also by more than half of respondents.

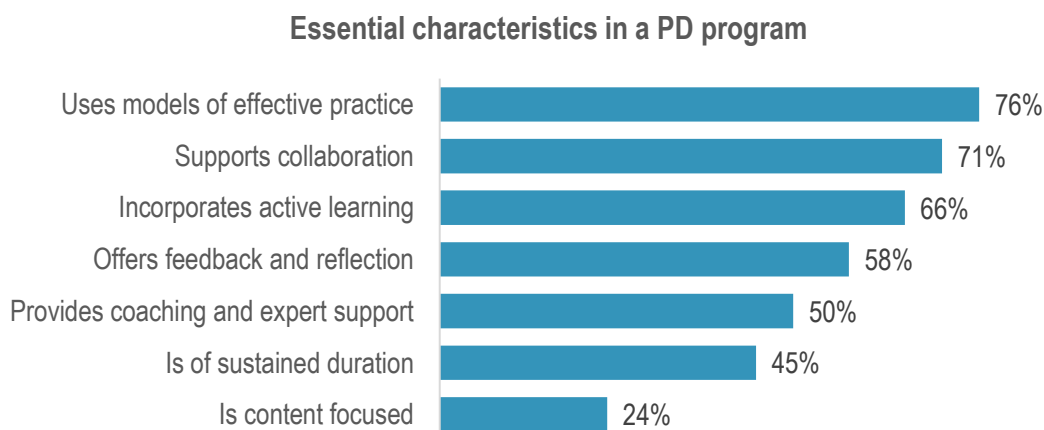


Figure 13. Essential Characteristics in a PD program – Respondent percentage

5.2.10 Teachers’ selection of the most important characteristic of a PD program

Teachers were asked to select one of the essential characteristics enumerated before as to be the *most important* one in a PD program. 3% of respondents chose not to answer by leaving the space blank, while 6 % chose to add a different answer: “All” & “Time”. Even though ‘time’ is not actually a characteristic itself, it is a concept to be considered since it relates to that of ‘is of sustained duration’; if teachers do not have the necessary time to dedicate to their own PD, no program can be effective.

Out of the seven features presented, only five were selected as the ‘most important characteristic’, the most popular being ‘Uses models of effective practice’ (selected by 39% of respondents). Among the reasons given for this choice were: *“Helps avoid pessimism or mistrust towards the infinity of theories that result from pedagogy, especially those related to teaching methods”*, *“Sometimes, concepts remain as theories and then disappear. It is important to acquire strategy and put it into practice”*, and *“on many occasions, trainers refer only to theories on how to transform the learning experience, but it is very hard for them to give concrete examples on how to do so”*.

A total of 16% considers 'supports collaboration' as the most important, while a similar percentage selected 'Provides coaching and expert support'. One teacher said about collaboration: *"you can incorporate peers' experience without having to invest time on it, it is like reading a book but more adequately adapted to your reality since your colleague is in your same context"*. Another one explained: *"by collaborating with peers, one feels supported, you can corroborate that what you are doing is ok and you can complement each other with different subjects and knowledge"*. About receiving coaching and expert support, a teacher clarified: *"Because personalized learning should not only be for students but for every person"* and another *"Because an outsider may provide a different perspective of what is going on in the classroom"*.

An equal percentage of respondents (11%) selected 'Offers feedback and reflection' and 'Incorporates active learning'. On the first one, a teacher stated, *"It is necessary to have time for each one of us to design our courses for each year, since challenges change depending on each group of students"*. A teacher explained her choice of active learning by saying *"because we learn by doing"*. Another one, explained that *"if not, all can be reduced to just a good idea or beautiful intentions, with no real implementation"*, which aligns to what another teacher said, *"theories need to be put into practice to test their efficiency"*. The characteristics not selected were: 'is of sustained duration' and 'is content focused'.



Figure 14. Most important characteristic for an effective PD program

6 DISCUSSION

What does all this information mean to the issue of how effective PD programs in the schools are? How can it be used to design better and more accurate PD Programs? It is the intention of this research to understand the needs and challenges to determine a starting point, a definition of what should be addressed, which alongside with examples of other worldwide best practices of PD, will help define how to efficiently support teachers in their role as students' guide in this 21st century.

This Discussion sections intends to analyze, compare and integrate the information collected through the surveys with the literature review conducted. The first section looks at the needs of teachers and students and how these relate to each other and also, in some occasions, to those in Argentina. The second section focuses on current and ideal PD programs. Teachers' answers about PD programs are contrasted to what they defined as needs and challenges here, looking to stress the relationship between programs and the teachers' struggles. Lastly, the third section looks to describe suggestions for improvements, including the description of international programs and an analysis of all the answers provided by teachers in relation to each other.

The collected information therefore constitutes a key input to support the development of ideas, focusing on the needs and challenges as evidence, that changes need to take place to support teachers today. By addressing their needs and challenges, understanding what teachers need and by providing them with the necessary tools they are asking for, they will be empowered, and the overall learning experience enhanced, both theirs and that of their students.

6.1 Teachers' and students' needs and challenges today

The answers collected through the questionnaires and interviews conducted provides a clearer image of what is going on inside the targeted schools regarding the needs and challenges being faced by teachers and students. Identifying these needs and challenges is a fundamental step towards efficiently addressing the problem.

Findings suggest that in many cases, teachers feel challenged to address their students' needs and their own. School directors also refer to many of the needs and challenges that teachers described in the questionnaires conducted. This shows a certain degree of knowledge and

contemplation of what is going on inside their school, which is the first step to bring about changes. They mentioned for example, that students need more motivation and engaging learning opportunities, which a majority of teachers (53%) refer to as being one of the challenges they are facing, finding how to motivate their students, finding that “hook” to keep them engaged.

Both teachers (50%) and directors agreed that personalizing the learning experience is also connected to students’ needs. Furthermore, more than half of the teachers (66%) reflected that they need smaller number of students per class, which could be related to a more personalized learning approach. In the targeted schools, class sizes are normally between 26-30 students, as stated by 76.3% of the teachers. Argentina’s average of students-teacher ratio in the secondary level is 20 students per teacher (2017 National Education System Statistical Report), which is lower than that of the targeted schools. There is not one universal ideal class size existing today; researchers remain divided on the real impact that class size has on education’s quality and therefore policies within countries are varied. The question remains whether smaller classes would satisfy both teachers’ and students’ need on a more personalized learning experience. Further research is needed to explore this possible link.

Pursuing a 21st century education was mentioned across the interviews and questionnaires. Also, Argentina’s government has presented a plan that intends the implementation of changes towards a 21st century education. Government officials developed a list of skills, aligned to the mentioned 21st century skills, that are to be developed throughout mandatory education. In this same line of thinking, teachers reflected upon those skills students need to develop (68% consider it a student need) and as a challenge for teachers (42%). School directors mentioned ‘innovation’ as a student need, which is also aligned to the development of such 21st century education, as one teacher explained: “(the biggest challenge is) *being capable of adequately responding to demands. The 21st century teacher needs to be innovative, know how to manage collaborative work, guide personalized learning and be able to deal with issues that are not related to pedagogical issues. This challenge requires a lot of training and support*”. More than half of the teachers mentioned needing training in new ways of teaching and learning, apart from time for training. These needs should be taken into consideration when planning PD opportunities. Teachers referred to a dichotomy between what they are expected to do (by the government and by school directors) and the current traditional school setting, which often does not reflect addressing the needs and challenges, nor the official national curriculum.

It is interesting to point out, that after having stated all the challenges and needs teachers are facing, some of them being needing more or higher quality training, almost half of the teachers considered themselves to be either 'well' or 'somewhat prepared' to teach for the 21st century. Therefore, the question of how prepared they are raises doubt on its accuracy, on whether it should be related to the need of transforming PD programs to better support teachers. A better definition of 'prepare' and '21st century' would have helped to add accuracy to this question. It may be that they feel prepared but not because of training received in their job settings, but due to other experiences.

More than half of the teachers (66%), consider that students should develop socio-emotional intelligence. In *The EQ Edge: Emotional Intelligence and Your Success*, the author defines this term as "a set of skills that enables us to make our way in a complex world—the personal, social, and survival aspects of overall intelligence, and the elusive common sense and sensitivity that are essential to effective daily functioning". (Stein, 2011, Chapter 1). There is uncertainty of what students will face in the future, so assisting them in developing this type of intelligence will strongly benefit students in facing future challenges.

Collaborating with other teachers and receiving feedback were also dominant within the response for teacher needs, each reaching almost 40%. These two needs may be addressed together and will be mentioned again when discussing PD opportunities. Furthermore, time for training, research and reflection were also mentioned as needs. The director in School #3 reflected "*We are struggling with teachers working in more than one school and so having very tight schedules. This results in almost no time for planning and reflection inside the school*". Most of the teachers work in only one school, but one fifth of the respondents work in two schools and 10.5% of teachers work in three or more schools. High school teachers in Argentina are assigned individual classroom hours resulting in them not sharing a similar schedule with their peers, so teachers may not be in the school at the same time.

Lack of appreciation by different education stakeholders was mentioned by school directors and by teachers themselves. The need for school directors' recognition reached 25% of teachers' responses. Varkey Foundation's research on pupils' and society's respect for teachers also shows the great need to address this lack of appreciation: 74% of respondents in Varkey Foundation's survey stated that teachers in Argentina are not respected by society. Therefore, programs for

professional development should also look to meet this need, which is not only present within the targeted schools, but is common around the Argentinean society.

6.2 Professional Development Programs: current and ideal

According to Andragogy theory, one of the principles for adult learning is that adults have more interest in learning what has an immediate relevance and impact to their job or personal life. Therefore, reflecting on what teachers needs and challenges are is of great importance, as these become the basis for the creation of efficient PD opportunities, which are essentially learning opportunities. These opportunities should look to address those needs and challenges to directly impact teachers' jobs. As Avalos stated, teachers' learning is a complex process that needs to be addressed as such for teachers to be able to transform "their knowledge into practice for the benefit of their students' growth" (Avalos 2011).

Similarities between the mentioned needs and challenges and the desired characteristics of PD opportunities are found among the answers provided by teachers and school directors throughout the questionnaires and interviews. The exercise of reflecting on these needs, challenges and opportunities corresponds to the use of the experiential learning cycle in the teacher education program, which represents a more effective way to promote change and improvement of teaching practices.

A majority of 69% of teachers mentioned they would spare 2-3 hours for their own PD, some of them even eager to spend more. This is greatly interesting since it shows a great commitment from teachers towards their own professional growth and development. Unfortunately, teachers also mentioned needing more time to spend in training, reflection, research and planning. School directors mentioned the issue of teachers working in more than one school and not being all at the same time within the school. Therefore, the question arises of how teachers may effectively spend time in school, whether they should be assigned more non-classroom hours, a starting point for potential improvement of their current PD programs. One school director mentioned that teachers used to look for PD opportunities outside the school, since these were not offered inside the institution. One of the teachers mentioned: *"I want training on different aspects of education. They could be workshops, classes on specific content or suggested readings, with time to reflect and*

discuss on what was learnt", which stresses this great commitment towards their professional growth.

Therefore, if most teachers are eager to spend time in their PD and they certainly have many needs and challenges that must be addressed, in what ways do current PD opportunities have to change in order to effectively support teachers? Teachers themselves provided that answer.

When asked about what type of PD opportunities teachers want, trainings on different skills were mentioned, which correspond to the needs mentioned in earlier questions, stressing the idea of the importance of PD opportunities to be aligned to the current needs and challenges teachers face, thus having immediate relevance and impact on their jobs. For example, teachers mentioned wanting training on 21st century approach, which was also mentioned as a student need today (by 68% of teachers) and would fit the characteristic of PD opportunity being 'content focused' selected by 25% of teachers.

More than three quarters selected 'Uses models of good practice' as a feature to be included in PD programs, being this also considered as the most important one by 37% of respondents: *"Sometimes, concepts remain as theories and then disappear. It is important to acquire strategy and put it into practice"*. This connects to their need for opportunities that are more content-related, practical and adaptable to their school settings that were mentioned in other questions. Teachers mentioned PD opportunities being "irrelevant" since *"On many occasions they do not correspond to what goes on inside the classroom"*. Incorporating this feature to PD programs would address this problem.

'Supports collaboration' was also among the most popular responses chosen, being selected by 71%, as a characteristic of effective practice, and by 16% as the most important one. In earlier questions, teachers referred to peer collaboration as a need (by a majority of 39% of teachers) and challenge. They want collaboration to *"compare myself with others"* and even compared collaboration to *"reading a book but more adequately adapted to your reality since your colleague is in your same context"*. Teachers referred to different types of collaboration, including observing classes, interdisciplinary workshops, interschool workshops and exchange programs. Collaboration with other is believed to positively impact teachers' learning environments.

Following, 66% of the teachers includes 'incorporates active learning' as an effective characteristic, which only 5% considered to be the most important one in a PD program. Active learning involves teachers being directly involved in designing and trying out teaching strategies. A teacher referred to this as "*we learn by doing*". Choosing this feature connects to teachers need of more 'relevant' PD opportunities, one stated that "*On many occasions they do not correspond to what goes on inside the classroom*". Acknowledging teachers' role in their own education (as stated by adult learning theories and experiential theory), this need can be fulfilled.

Offers Feedback & Reflection and Provides Coaching & Expert Support were also popular features selected by more than half of respondents. Teachers seem to be eager, as shown in earlier questions, to have time for these types of sessions. More than a third of them mentioned needing feedback on their work as teachers (question #1). Their selection only stresses that need. This feature also relates to that of collaboration with others since the later also provides a safe space for teacher to reflect upon practices, receive feedback and make the needed changes to their practice.

On 'Coaching and Expert support', 13 % of the teachers considers it to be the most important feature in a PD program. It relates to their need of appreciation, feedback and overall support in their role as teachers. As one teacher explained: "*... an outsider may provide a different perspective of what is going on in the classroom*".

On a final note and referring back to the amount of time teachers would spare for PD opportunities, the characteristic of the program being 'of sustained duration', was not mentioned as the most important feature, though it was recognized as an essential characteristic by almost a quarter of respondents. PD must provide teachers with the necessary time for them to learn, practice, implement and reflect on previous experiences. Therefore, even though teachers did not choose this feature directly, the need for it to be a characteristic of an effective PD program is inferred by teachers' and directors' answers.

6.3 Suggested improvements on current PD programs

A review on the research done by US Center of International Education Benchmarking¹ provides valuable information on the education systems in top performing countries around the world. The center works on 2015 PISA results to identify which are these top performing countries and provides a detailed profile on each one of them. The list of countries is Canada, China, Estonia, Finland, Germany, Hong Kong, Japan, Netherlands, New Zealand, Singapore, South Korea, and Taiwan. In order to compare what is going on in these countries and what is currently happening in this thesis's targeted schools, a short description of three of these countries' PD programs is provided below: Finland, Singapore and Japan.

In Finland, PD opportunities for teachers are attended by the National Government and Municipalities. Three days are assigned a year for mandatory PD by the National Government, leaving Municipalities to determine specific requirements. Seven days are assigned on average to PD throughout the country, including both in-service and multi-schools' trainings. It is important to mention that these seven days does not refer to the characteristics mentioned before by the Argentinean teachers, since those are already included in Finnish teachers' schedules. The teachers' work in school already includes a great deal of teacher collaboration to support their growth, such as time for planning, collaborating, meetings with other teachers to discuss challenges or successes, reading and research. All these features were mentioned by teachers in the questionnaire conducted, either as a need, challenge or as a demanded PD opportunity.

In Singapore, a variety of PD opportunities are accessible to teachers, which can participate in as many as 100 hours of PD per year. Conferences, forums, seminars, in-service and online trainings on a variety of subjects related to teaching are among the opportunities offered by the Ministry of Education and National Institute of Education. Teachers are even offered study leave and scholarships for those wanting to pursue MA and PhD which shows how well-regarded PD opportunities are in Singapore. Teachers in the targeted schools mentioned wanting more opportunities for their PD and for this to be of better quality, being more adequate to their needs and challenges. Singapore's example of online trainings may help teachers who are not always at the same time inside the school to pursue PD opportunities.

¹ The Center of International Education Benchmarking (CIEB) is a program part of US National Center on Education and the Economy. CIEB funds and conducts research on the most successful education systems around the world to identify the strategies those countries have used to produce their superior performance. <http://ncee.org/>

As for Japan, continuum professional development is required in the teaching profession. At the local-level, teachers attend daily in-service training. Apart from this they are required to attend training programs for those who are five, ten and twenty years into their careers. At the national level, teachers need to prove they are up to date on skills and practices every ten years to renew their teaching certificates, which includes participating in at least 30 hours of PD a year. Argentina's Ministry of Education has yet to determine specific ways to support continuum PD of their teachers. One distinguished characteristics of the Japanese programs is that of "lesson study" in which teachers from an institution get together to address a need in the classroom through research, collaboration and the creation of a lesson plan. They then put the plan into practice, they test it and then make necessary adjustments. This teacher led research is a very interesting approach that would satisfy many of the needs and challenges mentioned by the Argentinean teachers in this research project, such as that of the PD opportunity including models of best practices.

The mentioned PD approaches should be considered as examples to be incorporated in a Finnish way (Sahlberg, 2015, p 8) meaning they are not to be replicated but acknowledged, learnt and then applied regarding the specific context in the targeted schools. It is clear from the findings from this thesis that Argentinean teachers need more and better PD opportunities; they look towards these as vehicles to support their work as teachers. Most are eager to spend between 2-3 hours a week in their PD, so school directors should act upon this. Types of opportunities are varied, but a consensus of MORE and HIGHER QUALITY was well identified throughout all answers provided. Teachers want more time, more effective trainings, more relevant workshops, more feedback, more coaching opportunities, more collaboration among them.

Understanding and acting upon the needs and challenges teachers are facing will result in eliminating the "irrelevant" PD opportunities and catching up on the "insufficient" amount of training provided, overall transforming teachers' PD programs.

7 CONCLUSION

The research presented in this thesis highlights the need to improve the current PD programs that are underway in the targeted schools as well as in those with similar characteristics, stressing the imminent need of focusing on school's reality to better support teachers and students. Further research is necessary for the findings and conclusions of this research to be relatable to the context of other Argentinean schools, which do not correspond to the targeted sector, since teachers in those schools might face very different needs and challenges. In any case, it is essential that these are identified and addressed within their contexts to better serve students, to better prepare them for the future of Argentina and the world. Therefore, by empowering teachers, students are also empowered. That is why the transformation of teachers' PD is so essential in the targeted schools, it is the answer to overcome the recognized challenges and needs.

Teachers in the targeted schools are eager for changes to take place. They identified a variety of needs and challenges that need to be addressed for them to fully be capable of assisting students learning experience. They also identified different features as essential within a PD program, most of which correspond to a way of addressing the needs and challenges previously mentioned. As stated by Avalos (2011), PD programs are a type of adult education, and therefore must be adequate to the teachers they are targeting, which is why studies such as the one outlined in this thesis are so important. Those in charge of designing such programs need to shift their focus towards the needs of teachers and to the variety of contexts in which they learn and teach as basis for their learning experience. International PD practices may also be studied and implemented in Argentinean schools, only if they are adaptable to the local reality.

Adult learning theories determine how important it is for teachers to be involved in the creation and development of the instruction sought, meaning they must be considered when planning what type of PD opportunities will be offered in the school, such as by the survey conducted here. An experiential learning approach is suggested as an effective way of designing such programs, as teachers have an experience, reflect upon it, make conclusions and then try out what they have learnt. Apart from this, adult learning theories also support that for teachers' trainings to be effective they need to be problem-centered, have a direct impact on teachers' role and have an experiential approach, which were all features recognized in this thesis findings as those need to be present in effective PD opportunities.

The findings suggest that the data provided by teachers should be taken into consideration to transform their PD program, incorporating what teachers consider to be best practices for effectively addressing the needs and challenges they are facing as students' guides in their learning endeavor. As one of the respondents stated, teachers struggle *"being capable of adequately responding to demands. The 21st century teacher needs to be innovative, know how to manage collaborative work, guide personalized learning and be able to deal with issues that are not related to pedagogical issues. This challenge requires a lot of training and support"*. Teacher PD programs should not consider teachers as passive learners but must be designed to reflect the principles of adult learning.

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Spanish version:

1. ¿Qué tipo o espacios de *desarrollo profesional docente* se ofrecen en el colegio?
(Cursos, charlas, jornadas de reflexión, momentos de colaboración etc.)
2. ¿Trabajan con alguna empresa en particular o crean sus propios espacios? Si trabajan con empresas, ¿por qué la/s eligieron?
3. ¿Cuánto tiempo al año le dedican al *desarrollo profesional docente*?
(Semanas, días, horas)
4. ¿Cuáles crees que son los desafíos y las necesidades hoy de los estudiantes en tu colegio?
5. ¿Cuáles crees que son los desafíos y las necesidades hoy del docente en tu colegio?
6. ¿Cómo actúa el colegio frente a esas necesidades y desafíos?
7. ¿Crees que las oportunidades de Desarrollo Profesional deberían estar alineadas a esas necesidades y desafíos?
8. ¿Qué características tiene el Programa de Desarrollo Profesional ‘perfecto’?

English Version:

1. What are the Professional development opportunities currently being offered in the school?
2. Do you work alongside with any company who provides these PD opportunities, or do you create your own programs? Why did you choose to work with such company? Why did you decide to create the program yourself?
3. How much time a year is dedicated to Teachers’ PD?
4. What do you think are the needs and challenges of students in your school today?
5. What do you think are the needs and challenges of teachers in your school today?
6. How is the school currently addressing those needs and challenges?
7. Do you think PD programs should be aligned to teachers’ needs and challenges?
8. What would the perfect PD program entail?

4/17/2019

¿Cómo se están preparando los profesores hoy para brindar una educación del siglo XXI a sus alumnos?

¿Cómo se están preparando los profesores hoy para brindar una educación del siglo XXI a sus alumnos?

En primer lugar, muchas gracias por ser parte de este cuestionario. Su participación es CENTRAL para la investigación que estamos llevando a cabo!

A través de las siguientes preguntas, buscamos ahondar en los desafíos y necesidades que tienen los profesores en la actualidad, principalmente en relación a la llamada "Educación del Siglo XXI".

Nuestro objetivo es comprender mejor a los profesores y así ofrecerles soluciones innovadoras, reconociendo el rol central que prestan dentro del futuro de la educación de calidad.

Nuevamente, estamos muy agradecidos por su participación. Al finalizar el cuestionario podrás encontrar nuestro datos por cualquier consulta.

SALUDOS!

*Required

Necesidades y desafíos

1. 1. ¿Qué necesitas hoy en relación a tu trabajo como docente? *

Seleccioná hasta 5 necesidades presentes en tu día laboral

Tick all that apply.

- Colaboración con otros docentes
- Menor cantidad de alumnos por clase
- Cambios en el sistema de evaluación a alumnos
- Capacitación de nuevas tecnologías
- Valoración por parte de directivos
- Valoración por parte de padres de alumnos
- Valoración por parte de alumnos
- Tiempo para recibir capacitación
- Tiempo para investigación
- Flexibilidad para diseñar la programación anual
- Capacitación de nuevas formas de enseñanza y aprendizaje
- Tiempo de planificación
- Feedback sobre desempeño como docente
- Confianza en tu labor como docente
- Other: _____

2. 2. ¿Qué crees que necesitan tus alumnos hoy en relación a su desarrollo académico? *

Selecciona hasta 5 necesidades presentes en tus alumnos

Tick all that apply.

- Aprendizaje basado en la repetición/memoria
- Aprendizaje contextualizado
- Aprendizaje de habilidades
- Aprendizaje estandarizado
- Aprendizaje personalizado
- Aprendizaje compartimentado
- Desarrollo de inteligencia socio-emocional
- Aplicación de Tecnologías de la Información y Comunicaciones en el aprendizaje
- Evaluaciones estandarizadas
- Aprendizaje colaborativo

3. 3. ¿Cuál es tu mayor desafío hoy como docente del siglo XXI? *

Desarrollo Profesional Docente

Se entiende como Desarrollo Profesional Docente: "el aprendizaje de los profesores sobre cómo aprenden a aprender y a transformar su conocimiento en práctica para beneficiar el desarrollo de sus alumnos. El aprendizaje profesional docente es un proceso complejo que requiere la implicación cognitiva y emocional de los profesores, tanto individual como colectivamente, la capacidad y disponibilidad para examinar dónde cada uno se encuentra en términos de convicciones y creencias, así como el análisis y la puesta en práctica de alternativas apropiadas para la mejora o el cambio". (Avalos, 2011).

4. 4. ¿Qué tan preparado/a te sentis para brindar una educación propia del siglo XXI a tus alumnos? **Mark only one oval.*

- Muy preparado
- Medianamente preparado
- Preparado
- Algo preparado
- Nada preparado

5. 5. ¿Qué tipo de oportunidades de desarrollo profesional docente te gustaría tener? *

6. 6. ¿Cuánto tiempo de la semana le dedicarías a tu desarrollo profesional docente? *

Mark only one oval.

- Menos de 30 minutos por semana
- Entre 30 minutos y 1 hora por semana
- Entre 2 y 3 horas por semana
- Entre 3 y 4 horas por semana
- Más de 5 horas por semana
- Other: _____

7. 7. ¿Qué espacios de desarrollo profesional docente ofrece actualmente tu empleador? *

Enumerá los espacios que recuerdes.

8. 8. ¿Qué opinas sobre los espacios de desarrollo profesional docente que ofrece tu empleador? *

Por favor, escribir una breve reflexión sobre estos espacios.

4/17/2019

¿Cómo se están preparando los profesores hoy para brindar una educación del siglo XXI a sus alumnos?

9. 9. ¿Cuáles de estas características son esenciales en un programa de desarrollo profesional docente? *

Marcá todas las que creas esenciales

Tick all that apply.

- Provee apoyo de un coach y/o especialista
- Incluye espacios focalizados en contenidos
- Ofrece feedback y espacio de reflexión
- Provee ejemplos de prácticas efectivas
- Provee el tiempo necesario para su participación
- Incorpora aprendizaje activo (por ejemplo: probar las estrategias que se aprenden)
- Apoya la colaboración entre colegas
- Other: _____

10. 10. ¿Cuál característica de la lista anterior crees que es la más significativa? ¿Por qué? *

DATOS

11. Cargo docente actual (asignatura/s que enseñas): *

12. Cantidad de instituciones educativas donde trabajas actualmente: *

13. Rango de edad: *

Mark only one oval.

- Menor a 23 años
- 24 - 30 años
- 31 - 40 años
- 41 - 50 años
- 51 - 60 años
- Mayor a 61 años
- Prefiero no decir

4/17/2019

¿Cómo se están preparando los profesores hoy para brindar una educación del siglo XXI a sus alumnos?

14. Años trabajando como docente *

Mark only one oval.

- Menos de 1 año
- 1 - 5 años
- 6 - 10 años
- 11 - 20 años
- 21 - 25 años
- Más de 26 años
- Prefiero no decir

15. Cantidad promedio de alumnos por clase: *

16. Maximo nivel educativo alcanzado *

Mark only one oval.

- Secundario
- Formación Técnica y profesional
- Licenciatura
- Maestría, Especialización
- Doctorado
- Other: _____

17. Comentario final

No dudes en dejarnos tu reflexión o comentario sobre esta encuesta!

SECTION 1 of 4

¿How are teachers preparing themselves to provide a 21st Century Education to their students?
First and foremost, thank you for participating in this questionnaire. You are CENTRAL for the research we are carrying out!

Through the following questions, we seek to delve into the challenges and needs that teachers face today, mainly regarding what relates to the so-called "21st Century Education".

Our goal is to better understand teachers and thus be able to offer them innovative solutions, recognizing their central role in the future of high-quality education.

Again, we are very grateful for your participation. At the end of the questionnaire you can find our contact information for any question or comment that may arise.

Best Regards!

SECTION 2 of 4

NEEDS AND CHALLENGES

1. What do you need today regarding your work as a teacher at your school?

Select up to 5 needs that you recognize as part of your working day

- Training on new technologies
- Training on new ways of teaching and learning
- Feedback on your work as a teacher
- Planning time
- Time to receive training
- Research Time
- Collaboration with other teachers
- Students' appreciation
- Students' parents' appreciation
- Directors' appreciation
- Flexibility to design the annual curriculum
- Confidence/Trust on your work as a teacher
- Changes in the evaluation/assessment criteria of students
- Less number of students per class

- Other...

Options are shuffled to prevent answer option order bias

2. What do you think your students need most today regarding to their education in the school environment?

Select up to 5 needs you recognize

- Collaborative Learning Approach
- Compartmentalized Learning Approach
- Context- Based Learning Approach
- Skills Learning Approach
- Learning based on memory/ repetition
- Personalized Learning Approach
- Standardized Learning Approach
- Development of socio-emotional intelligence
- Use of ICT in learning methods
- Standardized assessments

Options provided were retrieved from an OECD Report:

Reference:

OECD. (2008). 21st Century Learning: Research, Innovation and Policy Directions from recent OECD analyses. Retrieved from <http://www.oecd.org/site/educeri21st/40554299.pdf>

3. What is your biggest challenge as a 21st Century teacher?

Long-answer text

SECTION 3 of 4

TEACHER PROFESSIONAL DEVELOPMENT

Teacher Professional development is understood as: "the teachers' learning about how they learn to learn and to transform their knowledge into practice to benefit the development of their students." Teacher professional learning is a complex process that requires the cognitive and emotional involvement of teachers, both individually and collectively, the capacity and availability to examine where each one finds themselves in regarding convictions and beliefs, as well as the analysis and implementation of appropriate alternatives towards improvement or change ". (Avalos, 2010).

4. How prepared do you feel to provide a 21st century education to your students?

- Well prepared
- Moderately prepared
- Prepared
- Somewhat prepared

- Not prepared at all

5. What type of PD Opportunities would you like to have?

Long-answer text

6. How much time in a week would you set aside for your own PD?

- Less than 30 minutes a week
- Between 30 minutes & 1 hour a week
- Between 2 & 3 hours a week
- Between 3 & 4 hours a week
- More than 5 hours a week
- Other...

7. What PD opportunities are offered by your current employer?

Enumerate those you remember.

8. What is your opinion regarding the PD opportunities that are offered to you by your employer?

Please provide a brief feedback on those opportunities

9. Which of these characteristics do you consider essential in a good PD program?

Select all you consider appropriate

- Is content focused
- Incorporates active learning
- Supports collaboration
- Uses models of effective practice
- Provides coaching and expert support
- Offers feedback and reflection
- Is of sustained duration
- Other...

Options are shuffled to prevent answer option order bias.

Reference:

Darling-Hammond, L., Hyler, M. E., Gardner, M. (2017). Effective Teacher Professional Development. Retrieved from: https://learningpolicyinstitute.org/sites/default/files/product-files/Effective_Teacher_Professional_Development_REPORT.pdf

10. Which one characteristic of the previous list do you consider the most important? Why?

Long- answer text

SECTION 4 of 4

PERSONAL DATA

Current teaching job (subject you teach): _____

Amount of educational settings in which you currently work (number): _____

Age range:

- Younger than 23 years old
- 24- 30 years old
- 31 - 40 years old
- 41 - 50 years old
- 51 - 60 years old
- Older than 60 years old
- Rather not say

Amount of years working as a teacher:

- Less than 1 year
- 1- 5 years
- 6 - 10 years
- 11 - 20 years
- 21 - 25 years
- More than 26 years
- Rather not say

Average amount of students per class:

- Less than 20:
- 20-25:
- 26-30:
- More than 30:

Highest education level attained:

- High school graduate
- Associate degree
- Bachelor's degree
- Master's degree
- Doctorate degree
- Other:

Final comment: Please, provide us with any feedback or comment you'd like to make!

Once the questionnaire was submitted by the teacher the following message was presented

Thank you very much for your participation. If you have any questions or would like to follow up with us in any way, please don't hesitate to contact us at:

Camila Oberst: m8obma00@students.oamk.fi

Agustin Perkins: agustinperkins@gmail.com

Victoria Fay: vicfay@gmail.com
