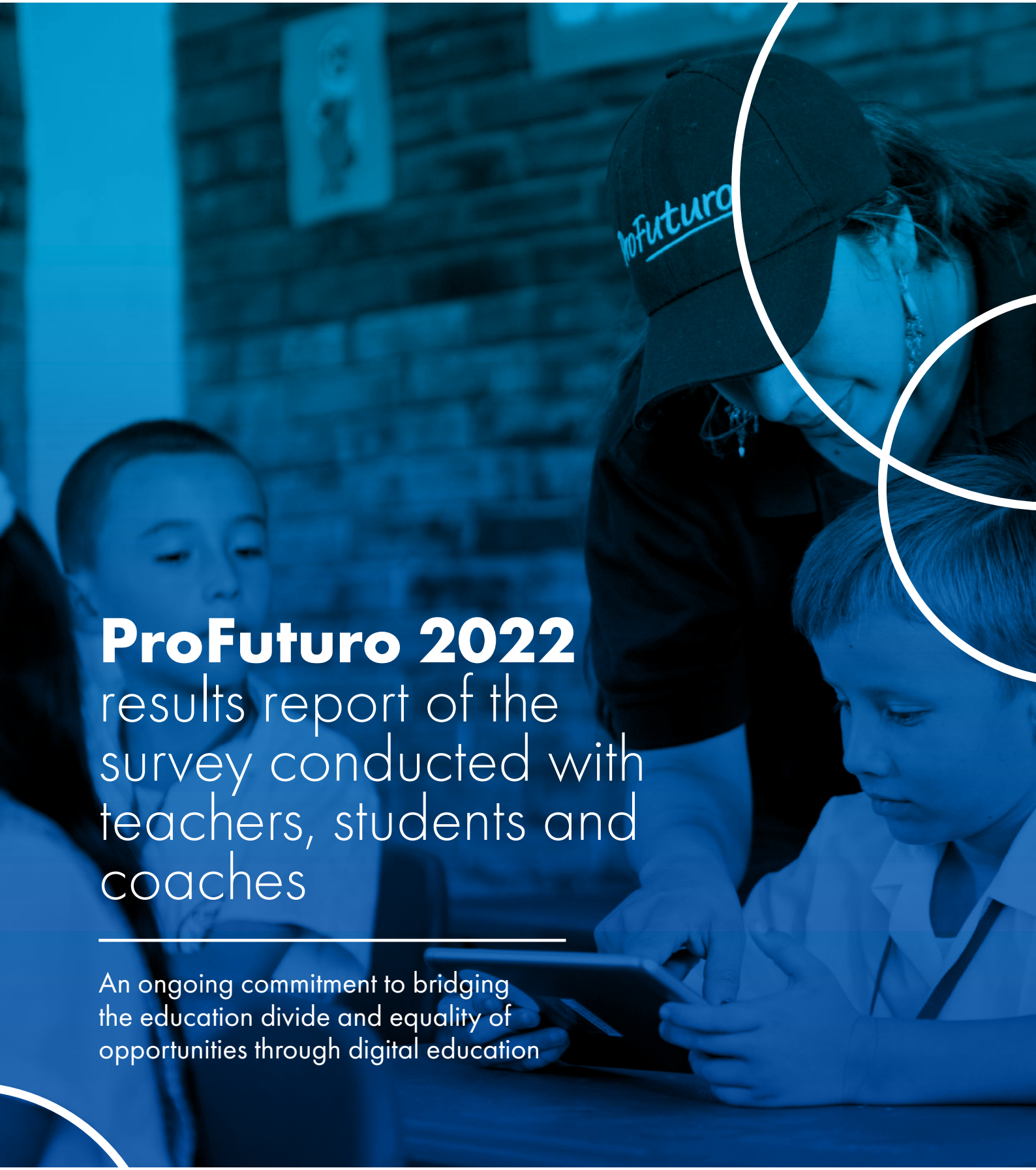
POSSIBLE LAB



ProFuturo 2022
results report of the survey conducted with teachers, students and coaches

An ongoing commitment to bridging the education divide and equality of opportunities through digital education

ProFuturo

UN PROGRAMA DE:

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1

ProFuturo

A programme designed to contribute to the sustainable development goals of the 2030 Agenda

ProFuturo is a programme of educational innovation with technology promoted by the Telefónica Foundation and "Lla Caixa" Foundation, aligned with goal 4 of the 2030 Agenda for Sustainable Development of the United Nations (SDG4), QUALITY EDUCATION. It focuses on bridging the education gap and promoting quality education for millions of children living in vulnerable environments in Latin America, the Caribbean, Africa and Asia.

The 2030 Agenda (UNESCO, 2020) indicates, that under SDG 4 QUALITY EDUCATION, education enables upward socio-economic mobility and is key to being able to escape poverty. It highlights the great strides that have been made over the last decade in expanding access to education and the enrolment rates in schools at all levels, especially among girls. It highlights the need for funding as one of the main challenges:

- 79 low and lower-middle income countries continue to face an average annual financing gap of $97 billion.
- To achieve Goal 4, financing education must become a national priority. Measures such as free and compulsory education, increasing the number of teachers, improving basic school infrastructure and digital transformation are essential.

It is proposed that countries should attain at least the following targets by 2030:

- Ensure that all girls finish primary and secondary education, which must be free, equitable and of good quality and produce relevant and effective learning outcomes.
- Eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for vulnerable people, including persons with disabilities, indigenous peoples and children in vulnerable situations.
- Significantly increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially the least developed countries and small island developing states.

ProFuturo aligns itself with this SDG specifically by:

- Providing online and offline training content to children at different educational stages.
- Offering teacher training linked to professional development.
- Supplying governments and/or local partnerships with the necessary infrastructure, content and techno-pedagogical advice for roll-outs, even in emergencies.
- Implementing a systemic intervention approach that empowers coaches and teacher leaders to galvanise school communities.
- Establishing a monitoring and evaluation system.
- Promoting knowledge-sharing communities.

ProFuturo structures its educational proposal on the basis of the Global Framework of Competence for Learning in the Digital Age and the Global Framework of Competence for Educating in the Digital Age.

ProFuturo has enabled students from different backgrounds to develop technological and digital skills, fostering critical thinking, self-learning, leadership, collaborative learning, motivation and research skills, and has improved their literacy skills; these being key elements for their future.

It has also been of great help in accompanying students with learning difficulties.

Testimonial of a teacher from Guatemala

These are reference frameworks that allow us to holistically approach two of the most relevant processes for individuals and societies in the 21st century: Learning and teaching in the digital age[1].

The ProFuturo programme incorporates three intervention models[2]:

The Comprehensive Model: It provides a digital solution with equipment and a learning platform, pedagogical guidance and technical support, professional development for teachers, a monitoring and evaluation system and a knowledge-sharing community. It works online and offline and proposes solutions that are useful to partially address and complement the local curriculum in each country.

THREE INTERVENTION MODELS

Comprehensive Model

Open Model

Humanitarian Contexts Model

The Open Model: It focuses on teacher training in educational innovation, leadership, communication and classroom planning. It offers face-to-face and online courses covering innovation and learning technologies, pedagogical skills and digital competences, which are accessible from any country in the world.

The Humanitarian Contexts Model: It complements the Comprehensive Model with other elements necessary to ensure education in an emergency and shelter context, such as providing a safe learning space and strengthening resilience through psychosocial support.

With a view to developing the intervention models, ProFuturo has a wide range of digital content for teacher training in order to develop digital competences and other competences related to methodology, citizenship and classroom management. One of the pillars of the programme is the recognition of the role of education professionals as key agents for transformation, teacher training, motivation and empowerment. Furthermore, there is a catalogue of training content aimed at primary school children.

In the case of the Comprehensive Model, the ProFuturo programme designs training proposals adapted to each role involved in the school with initiatives aimed at working with teachers, coaches, teacher leaders and school administrators.

1 Link to: ProFuturo-marco-competencial-es.pdf

2 Link to: https://ProFuturo.education/noticias/tres-modelos-intervencion-ProFuturo/

The figure of the coach and the teacher leader plays a fundamental role in the programme, training and guiding the school staff during the implementation of the project. This is why these professionals are trained in teacher professional development proposals, as well as in a series of key competences for the performance of their work.

In either case, the ProFuturo programme provides an intervention process at both macro (institutional/state) and micro (school/teacher-classroom) levels, with advice at all stages: the design of actions, their implementation and their evaluation.

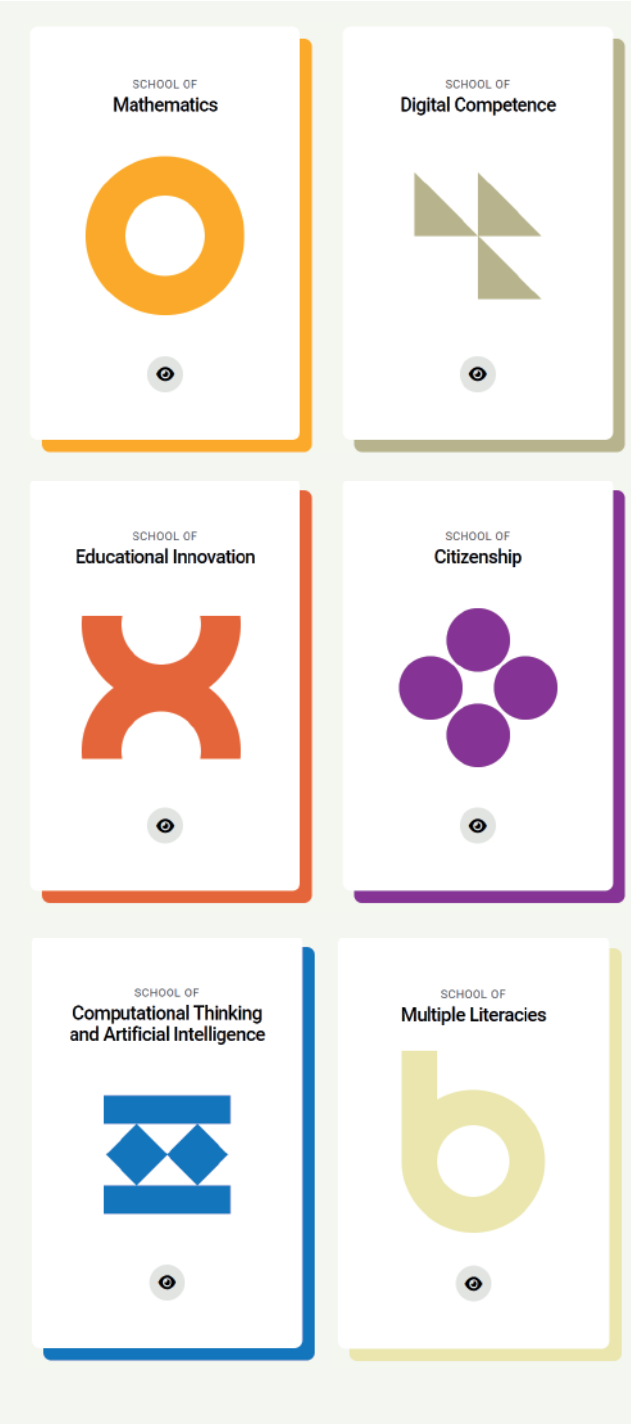
First of all, we feel challenged, and secondly, also motivated, because it is a tool that helps us in the process of teaching and learning for the students, isn't it? So... there is that mixture between the apprehension of using a new tool and the satisfaction of seeing the results obtained... ProFuturo has also generated methodological changes with a positive impact on the organisation and planning of the classes.

Testimonial of a teacher from Guatemala

ProFuturo's educational resources and training proposals are grouped according to the thematic areas and the competencies that can be developed for both teachers and children, therefore, the catalogue of contents is structured into schools of knowledge. These have been defined taking into account ProFuturo's strategic focuses and the current availability of resources.

ProFuturo is present in 45 countries in Latin America, the Caribbean, Africa and Asia. It has trained more than 1.4 million teachers and has reached 28 million children in these four Regions.

The programme has a robust monitoring and evaluation system which is based on the programme's Theory of Change and has defined a set of indicators to monitor the resources, activities and results obtained. From 2021 onwards, it will include the annual collection, through surveys, of the assessment of the programme's main stakeholders: teachers, children and coaches.



2 Purpose of this report

The purpose of this report is to present some of the main results obtained in the programme evaluation surveys carried out during the months of November and December 2022 by the ProFuturo Foundation among teachers, coaches and students.

This series of surveys aims to assess the level of achievement of the main results obtained by ProFuturo, as well as the adequacy of the project's resources and activities, thereby generating learning about the validity of the Theory of Change defined for the different intervention models and the opportunities for improvement in the implementation of the programme. The evidence and conclusions presented below focus on the following programme outcomes and processes:

Effects on teachers' professional development through their participation in the ProFuturo programme:

- Increased motivation of teachers to improve their educational practices.
- Intensity and relevance of the methodological adjustments to their teaching carried out after the completion of the programme.
- Level of implementation of active methodologies as a result of participating in the programme.

Effects on children's educational development as a result of their participation in the ProFuturo programme:

- Increased effort, motivation and self-improvement after the programme.
- Improved attendance, student retention, attitude and discipline after the programme.
- Learning developed through the programme (levels of understanding, development of curricular and digital competences).

Assessment of the technological solutions and programme content:

- Usability of the virtual learning environment.
- Perception of the appropriateness and quality of ProFuturo content.

3

Study methodology

The design of the surveys, the execution and the drafting of the report was carried out by an external evaluation company of educational projects, Possible Lab, which has a history of more than 10 years of providing support to the design, implementation, evaluation and improvement cycle of educational policies and programmes.

Table 1 presents the set of surveys designed and submitted in 2022 and the final sample obtained:

Table 1: Distribution of surveys designed and submitted in 2022: Group, channels and sample.

Collective	Channel	Sample
Teachers (Open Model)	Digital survey via email of teachers	11,457
Teachers (Comprehensive Model)	Field surveys through ProFuturo solution	4,809
Students (Comprehensive Model)	Field surveys through ProFuturo solution	117,976
Coache (Comprehensive Model)	Digital survey via email of coaches	440

Variables defined for data analysis

Given their influence on the results, these surveys have been analysed taking into account a series of variables that allow us to understand the responses obtained according to the intervention model, the geogra-

phical context of the intervention and the personal characteristics of the stakeholders surveyed. Below is a description of the set of variables used:

Intervention model

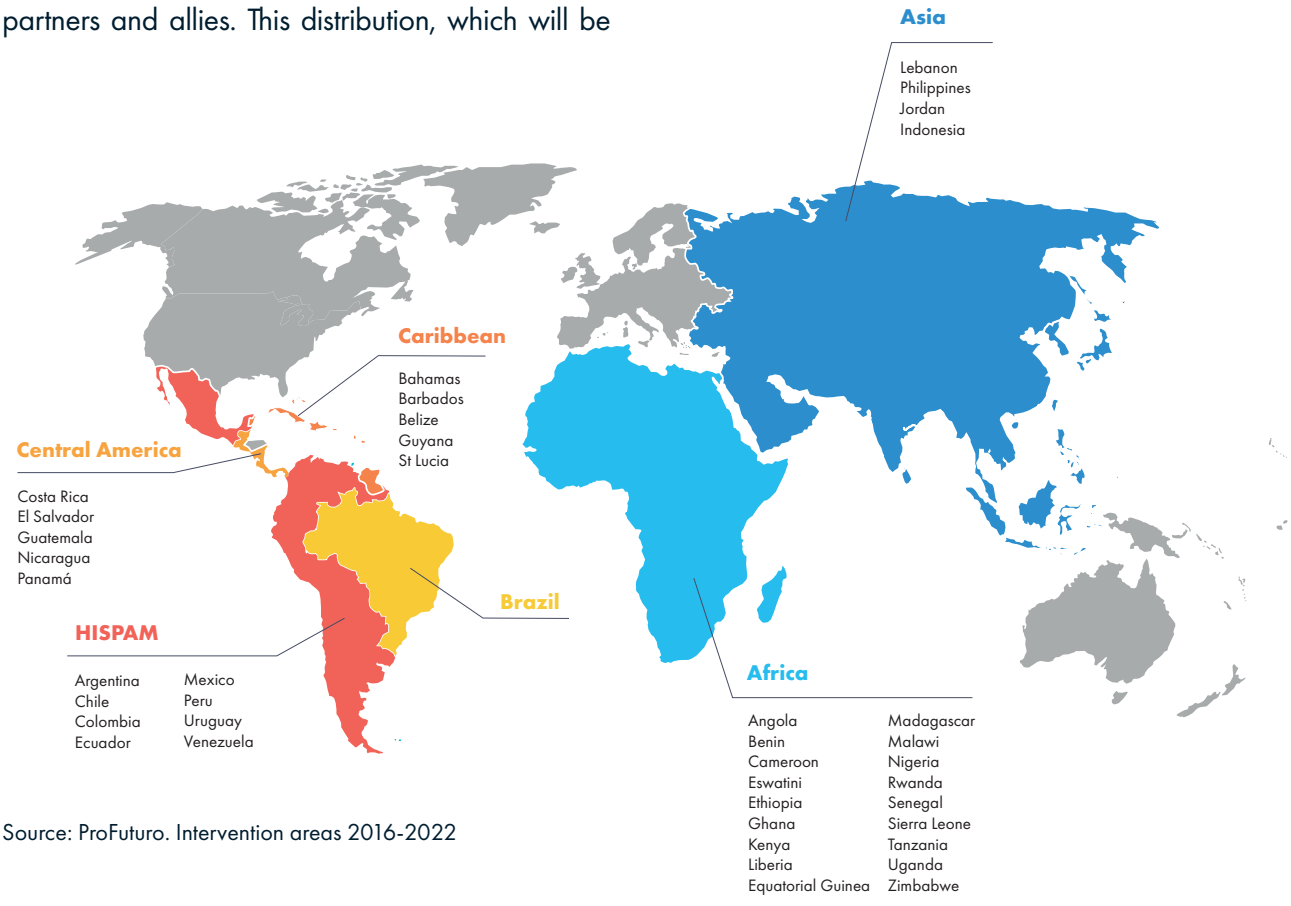
Also referred to as intervention frameworks in the report, it comprises the following:

- Open Model. Includes all teachers who carry out on-line training actions on the ProFuturo Overall Platform.
- Comprehensive Model. It includes the stakeholders who participate in the Comprehensive model and have been surveyed in the field: teachers, students and coaches.

Geographical areas of analysis (Regions, in the report)

Due to its intervention management and planning model, ProFuturo uses a specific geographical clustering that allows for an adequate development and governance of the programme together with its partners and allies. This distribution, which will be used throughout the report in reporting the results, includes the following geographical groupings:

- Africa and Asia. Include all countries on both continents where ProFuturo has a presence.
- Brazil. Due to their special nature, the results obtained in the country stakeholder surveys are analysed separately.
- Hispanic America (HISPAM). Includes surveys from all South American countries where Fundación Telefónica is the local partner responsible for the intervention.
- Central America. Includes surveys of the countries in the Region where the programme is implemented.
- The Caribbean. Includes surveys of the Caribbean Community (CARICOM) countries where the intervention is implemented.



Source: ProFuturo. Intervention areas 2016-2022

Educational stage

The responses of teachers and students are analysed separately:

- Pre-school education (teachers)
- Primary education (teachers and students)
- Secondary education (teachers and students)
- Tertiary education (teachers)

Sex

The responses of teachers, coaches and students are analysed separately according to sex.

- Male (Boy)
- Female (Girl)

Analysis

Different data treatments have been developed depending on the study variables, including descriptive and inferential bivariate analysis, applying statistical significance tests such as Chi-Square, T-Student or ANOVA.

Respondent characterisation

The final composition of the sample of respondents is presented in the following three tables.

Table 2. Sample distribution of the teacher survey

		2022	
		Number	Percentage
Overall		20.472	100%
Model	Open	5.482	26,78%
	Comprehensive	14.990	73,22%
Sex	Male	6.266	30,67%
	Female	14.166	69,33%
Age bracket	Under 30 years old	2.824	13,82%
	Between 30 and 39 years old	6.027	29,49%
	Between 40 and 49 years old	6.335	31,00%
	50 years old and over	5.249	25,69%
Educational level	Pre-school education	1.518	7,43%
	Primary education	14.168	69,34%
	Secondary education	4.662	22,81%
	Tertiary education	86	0,42%
Region	Africa	4.689	22,90%
	Asia	413	2,02%
	Brazil	1.250	6,11%
	The Caribbean	89	0,43%
	Central America	4.588	22,41%
	HISPAM	9.443	46,13%

*Table 3. Sample distribution of the coaches´ survey**

		2022	
		Number	Percentage
Overall		315	100%
Sex	Male	190	60,32%
	Female	125	39,68%
Age bracket	Under 30 years old	46	14,60%
	Between 30 and 39 years old	174	55,24%
	Between 40 and 49 years old	79	25,08%
	50 years old and over	16	5,08%
Region	Africa	96	30,48%
	Asia	12	3,81%
	Brazil	33	10,48%
	Central America	34	10,79%
	HISPAM	140	44,44%

*Support for coaches is only provided in the case of the Comprehensive Model.

Table 4. Sample distribution of the student survey

		2022	
		Number	Percentage
Overall		262.520	100%
Sex	Girl	119.484	46,38%
	Boy	138.163	53,62%
Age bracket	Under 10 years old	107.170	42,31%
	Between 10 and 12 years old	116.421	45,97%
	Between 13 and 15 years old	27.174	10,73%
	15 years old and over	2.503	0,99%
Educational stage	Primary education	221.716	96,24%
	Secondary education	8.665	3,76%
Region	Africa	120.563	45,93%
	Asia	7.437	2,83%
	Brazil	14.097	5,37%
	Central America	27.694	10,55%
	HISPAM	92.729	35,32%

Testimonials and images included in this publication

All the testimonies presented here faithfully reflect the opinions expressed by school leaders, teachers, coaches and students of schools participating in the programme. In order to illustrate the persons participating in the study, their express permission has been given to use their graphic image in the publication.

4

Improving learning experiences and outcomes

The group of students in the ProFuturo programmes

This section presents the main evaluation results related to the improvement of the student learning experience and outcomes. They are all based on the opinions collected in the surveys of Open Model teachers (11,457 responses) and of teachers (4,809 responses) and students (117,976 responses) of the Comprehensive Model during 2022. These are the results analysed:

Motivation and educational effort	Intensity of participation in learning activities.
Commitment to the educational process	Absenteeism, student retention, attitude and discipline.
Learning	Improves understanding of study topics. Development of curricular competences. Development of digital skills.

And you... What do you think?

I find it more fun to come to school now, I come and learn by playing, not just by listening and studying. One of the things I like the most is that now I can understand subjects that I didn't understand before when the teacher was explaining them to us. I used to miss school, but now I come all the time.

When we work with tablets, the teacher has more time for us, before we used to write down what he was saying while he was talking. I also like to help other children to use the tablet, I am very good at it.

Using the tablet has made me want to learn more than just what is taught in school. I would like to be a doctor. Although many girls stop studying early, I think I might be able to continue studying. I really want to. Now I see that there is no difference between boys and girls, we learn the same thing. My family also sees that I can do the same as a boy and learn whatever I want.

I really like being able to use a tablet. Before ProFuturo brought the tablets to my school, I didn't imagine I would ever be able to use one. We use them one day a week and the day before at home I get happy and tell my mother about it. I am also teaching her and my grandmother what I learn. I wish there were more days!

Synthesis of different testimonies of children participating in the programme

Motivation and educational effort

Significant increase in students

Studies on motivation identify two determining factors in learning:

- Students' expectation of their ability and responsibility to complete tasks and develop subject learning,
- Their interest in and importance attached to tasks and learning as a whole.

Perceived value, interest and importance have a significant impact on effort, academic performance and student retention in studies[3]. Understanding students' motivation correlates with their self-perceived ability linked to studies, their responsibility, commitment and interest in their academic development, all of which can have an impact on:

- Empowering children to project their future.
- Student retention, which in these intervention contexts is closely linked to the promotion of equal opportunities (with a particular emphasis on girls).

As observed in the following table, 96.06% of the students consider that the project's digital solutions favour a significant increase in their effort when carrying out educational activities in their school, with 76.68% giving the maximum score.

3 Lo KWK, Ngai G, Chan SCF and Kwan K-p (2022) How Students' Motivation and Learning Experience Affect Their Service-Learning Outcomes: A Structural Equation Modeling Analysis. Front. Psychol. 13:825902. doi: 10.3389/fpsyg.2022.825902

Table 5. Do you work harder at school when you use your tablet for activities (or Digital Classroom at home)?

2022

Never	A little	Quite a lot	A great deal
0,67%	3,27%	19,38%	76,68%

Source: Students' survey

When comparing the results obtained by region, some relevant differences can be seen: the surveys collected in Africa (88.21% of maximum scores) and Asia (78.26%) show better ratings in relation to the cases of Brazil (71.91%), Central America (71.81%) and HISPAM (63.93%).

Furthermore, when analysing the results according to educational stage, students in primary education are observed to have valued the increase in their effort using ProFuturo's digital solutions to a greater extent (77.12% of maximum scores) compared to students in secondary education, where the percentage is only 66.81%.

There are no significant differences by sex, with only a 2% positive difference between boys and girls.

It's more fun and gives us access to more knowledge.

Testimonial of a student from Zimbabwe

76,68%
highest ratings

88,21%
Africa: highest percentage of top ratings

77,12%
highest ratings in primary education

Commitment to the educational process

They attend school more, improving student retention, attitude and discipline

Children are more motivated to go to school thanks to the change in learning methodologies by using ProFuturo devices and content.

In this sense, 83.98% of the students clearly state that the programme increases their motivation to attend classes, with 76.36% of them giving it the highest rating.

Table 6. Since you have been working with tablets in class, do you want to come to school more?

2022

Never	A little	Quite a lot	A great deal
1,06%	4,97%	17,62%	76,36%

Source: Students' survey

Analysing the results by geographical area of intervention, again Africa and Asia have the highest scores, compared to HISPAM countries and Central America. The same trends can be seen in the analysis by sex, showing a slight favourable difference for boys.

In the afternoon they would finish their chores and say. 'What day is it tomorrow, Mummy?'. And I would tell them. 'Ah! Tomorrow it's Tablet day!' They were very happy to know that they were going to use it. The children were highly motivated, in addition to learning, to want to go to school.

Testimonial of a mother from Guatemala

When teachers were asked to what extent the project has increased students' commitment to their educational process, as shown in table 7, teachers consider that school attendance, student retention in the educational stage, attention and discipline are significantly improved, and that the programme is a factor that attracts new students to the school.

Table 7. Improved school engagement according to teachers

	Improved class attendance	Student retention	Improved attention and discipline	Attracting new students
% Not at all (1)	3,60%	3,76%	3,10%	4,80%
% A little (2)	14,25%	15,44%	14,50%	17,70%
% Quite a lot (3)	38,36%	38,19%	38,50%	34,20%
% A great deal (4)	43,80%	42,61%	43,90%	43,40%

Source: Survey to teachers of the Comprehensive Model

The programme is gender-balanced. Gone are the days when the most skilled jobs were reserved for men. The programme is getting boys and girls to learn together and realise that there are equal employment opportunities for both men and women.

Testimonial of a parent member of Zimbabwe's school development committee

70%
highest ratings in Asia

60%
highest ratings in Africa

In the four evaluated aspects, the highest percentages of top ratings were found among teachers in Africa (approx. 60%) and Asia (approx. 70%), compared to Central America (approx. 38% - 42%), Brazil (approx. 33% - 36%) and lastly HISPAM (approx. 30%).

In contrast, the responses obtained by educational stage confirm that the results are notably higher in pre-school and primary education (48.20% and 43.90% respectively) compared to the opinion expressed by secondary education teachers (38.80%).

What I liked the most was that I could understand subjects that I didn't understand when the teacher had explained them to us.

Testimonial of a student from Guatemala

11% more
more top scores in Primary Education compared to Secondary Education

72,87%
highest ratings

Learning

Improves understanding of study topics

Most notably, the students' evaluations show a significant improvement in their level of understanding of the topics and activities in the classroom thanks to the programme. 94.58% consider that the topics and activities are fairly or much easier to understand when using the equipment and contents of the programme, and, among them, 72.87% give the highest rating ("A great deal").

Table 8. Do you find it easier to understand topics and activities when using tablets?

	2022		
Never	**A little**	**Quite a lot**	**A great deal**
0,73%	4,70%	21,71%	72,87%

Source: Students' survey

In relation to the responses obtained by region where the intervention took place, the results obtained in Africa (84.09% of maximum scores) or Asia (73.48%) stand out, compared to the cases of Brazil (68.76%), Central America (67.38%) and HISPAM (60.48%).

If we look at the ratings expressed by educational stage, students in Primary Education give higher ratings (up to 11% more top scores) than those in Secondary Education. Finally, there is a slight favourable difference in the opinion of boys compared to girls (about 2%).

Learning

Development of curricular competences

The surveys asked teachers about the potential impact of the interventions in facilitating the development of their students' curricular competences. On a scale of 1 to 10, with 10 being the highest score, 67.37% of the ratings were between 8 and 10, with an average of 7.84 out of 10.

Table 9. How much have your students' competences in the knowledge areas of the educational curriculum improved as a result of the training you have received or the use of ProFuturo resources and content?

		2022		
		Average	Stan. dev.	%8-10
Overall		7,84	2,32	67,37%
Model	Open	7,14	2,46	55,14%
	Comprehensive	8,10	2,20	71,98%

Source: Teachers' survey

From the youngest to the oldest, they have developed cognitive skills that have been very, very important and this has been evident when it comes to the evaluations.

In the classroom we have different situations and this system allows us to capture the attention of the child who has difficulty in understanding some content; it reaffirms it. In addition, the use of the platform also greatly strengthens collaborative work and if someone has a difficulty, they mutually support each other.

Testimonial of a teacher from Zimbabwe

The teachers using the Comprehensive Model are those who show a higher average value (mean of 8.10) and a higher percentage of answers between 8 and 10 (71.98%), with statistically significant favourable differences compared to the results obtained in the Open Model (mean of 7.14, with a greater dispersion and only 55.14% of values between 8 and 10).

From the point of view of the regions where the intervention took place, the positive assessment of teachers in Africa (69.86%) and Central America (69.73%) and, although with a smaller sample, Asia (89.03%) stands out. In contrast, teachers in HISPAM countries and Brazil show lower ratings, close to 64%.

8,10 vs **7,14**

Average rating of teachers in the **ProFuturo Comprehensive Model** compared to the Open Model

The teachers have changed because now they have much more time for us with the tablets and they can see our knowledge in ProFuturo. Before the tablets, the teacher would write and we would write what she said.

Testimonial of a student from Zimbabwe

Now I see that there is no difference between boys and girls, we learn the same thing. My family also sees that I can do the same as a boy and learn whatever I want.

Testimonial of a student from Zimbabwe

Learning
Development of digital skills

The surveys asked teachers about the potential impact of the interventions in facilitating the development of their students' digital skills. In general, there is a positive assessment by the teachers surveyed, with 68.39% of them giving a rating of between 8 and 10 out of 10, with an average value of 7.84.

Table 10. How much has the training you have received or the use of ProFuturo resources and content contributed to improving your students' digital skills?

		2022		
		Average	Stan. dev.	%8-10
Overall		7,84	2,46	68,39%
Model	Open	6,87	2,73	52,28%
	Comprehensive	8,20	2,24	74,41%

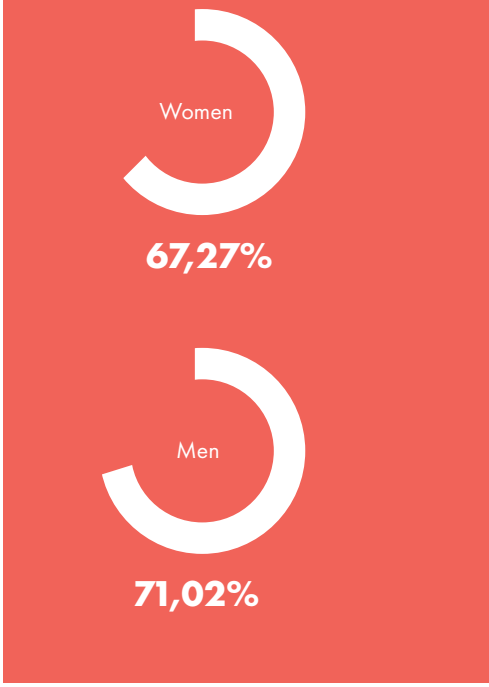
Source: Teachers' survey

In terms of intervention models, a significantly higher value was obtained in the case of teachers participating in the Comprehensive Model compared to the other intervention models. The differences are very notable both in terms of the average value (8.20 vs. 6.87) and in terms of the percentage of teachers who rate this item 8 or higher (74.41% vs. 52.28%).

When analysing the information according to socio-demographic variables, we found a significant and favourable difference between men and women (71.02% compared to 67.27%), with no appreciable differences by age or educational stage (except in the case of early childhood education teachers, with a lower score of around 10 percentage points).

Looking at the results from the perspective of the region of intervention, the most notable results are found in the case of teachers in Africa (71.11%) and, especially, Asia (88.72%).

68,39%
Teacher ratings between 8-10



However, if we look exclusively at the Comprehensive Model, which is common to all the regions under analysis, the situation is different. Asia maintains the best ratings (8.93 out of 10), Central America shows a remarkable score of 8.71, and Africa's score drops to 8.17 out of 10.

7,84
Average rating

8,20 vs **6,87**
Average rating of teachers in the **ProFuturo Comprehensive Model** compared to the Open Model

8,71
Average rating in Central America

8,93
Average rating in Asia

Technology and digital educational resources become a powerful inclusive tool and thus bring about a change in the mindset of students. Often the aim of the students is to work in whatever is available in the community context: for example, being a bricklayer or farming in the fields is like the biggest goal they have. Over time, they have opened their minds more and aspired to greater things; 'I want to be a doctor', 'I want to know more.

Testimonial of a coach in Guatemala

05

Accompanying the drivers of change

Teacher training as an impetus for transformation

The main evaluation results from the surveys of teachers participating in the Open Model (11,457) and teachers participating in the Comprehensive Model (4,809), as well as of coaches participating in the Comprehensive Model (440) during the year 2022 are presented below. These are the aspects analysed:

Motivation	More motivated to improve their educational practices.
Methodological changes	Intensity and relevance of change.
Active methodologies	Incorporating didactic proposals aimed at active learning through educational technologies.

And you... What do you think?

We are aware that technological development has brought about many important changes and the need to keep up to date. We had never had ICT training until now. Some of us knew something, and now, with the ProFuturo programme, all teachers have common digital competences.

If we are not trained, the students cannot benefit. I feel the programme provides us with empowerment, motivation and digital skills with ongoing training for my professional development. The tablets already came with well-designed programmes that were valued by the students and also allowed us to produce our own material.

We have more time, more time in class to attend individually to each student. This has been a great help in accompanying students with learning difficulties. We also have more time outside. It is no longer necessary to prepare lessons by hand, which used to be a lot of work. I would say it has been a solution to a very challenging problem in the teaching profession.

The arrival of the programme has led to methodological changes in the school, as a result of teacher training, with a positive impact on organisation and planning. In addition, ProFuturo has helped teachers to work as a team because we have had to share experiences and solve problems together.

Synthesis of different testimonies of teachers participating in the programme

Motivation

More motivated to improve their educational practices

Motivation is defined in learning as a personal condition for promoting, guiding and sustaining people's learning behaviours. By understanding the motivation of the teaching staff tells us of their interest in improving their teaching profile and in developing their daily activity.

Studies[4] indicate that teachers' demotivation, combined with a negative view of their students' skills, progress and results, hinders student-to-student relationships in the classroom and leads to an increased need for teacher control. In contrast, motivated teachers try to generate positive experiences and maintain an enthusiastic view of pupils.

Among the difficulties that can frustrate teacher motivation are the way in which the social context conceptualises education, the poor mastery of teaching technologies and the need to update and acquire new knowledge, all of which are variables addressed in the ProFuturo programme as the backbone of the intervention in teacher training. The teachers participating in the programme consider that the process has considerably increased their motivation to improve their practices and experiences with their students, obtaining an average evaluation of 8.73 out of 10, with 83.62% of the teachers giving ratings between 8 and 10. From the standpoint of the intervention models, the results are very consistent, obtaining an average of 8.86 out of 10 for teachers who have participated in Open Model programmes and 8.69 for the Comprehensive Model.

Before ProFuturo, teachers had to organise themselves to prepare the lessons by hand and this meant a lot of extra work, sometimes even demotivating them because of the time spent on the preparation and not so much time in the classroom. I would say it has been a solution to a very challenging problem in the teaching profession with a huge workload for so many years.

Testimonial of a head of school from Zimbabwe

4 Han, Jiying and Hongbiao Yin. (2016). Teacher Motivation: Definition, Research. Development and Implications for Teachers. Cogent Education 3 (1): 1-18.

Not only have we not lost teachers, but we have gained some thanks to the programme. My task as a coach is to accompany the teachers, to be able to go to the schools where they are working, to see how they have performed, to see how much progress they have made in the classes they are creating, to assist them. They are given training on how to create the classes and also to guide the students. They are also taught how to use the tablets.

Testimonial of a coach from Zimbabwe

83,62%
Teacher ratings between 8-10

8,73
Average rating

8,69 vs **8,86**
Average rating of teachers in the **ProFuturo Comprehensive Model** compared to the Open Model

Table 11. Do you feel more motivated to teach after participating in the ProFuturo training?

		2022		
		Average	Stan. dev.	%8-10
Overall		8,73	1,86	83,62%
Model	Open	8,86	1,57	86,50%
	Comprehensive	8,69	1,96	82,60%

Source: Teachers' survey

When analysing teachers' perceptions by region, Asia and Central America have the highest ratings (in both cases more than 9 out of 10). In Africa, the average score is 8.61 out of 10.

In relation to the improvement of teacher motivation thanks to the programme from the perspective of the coaching team, 60.30% of the total number of respondents consider that the programme generates an increase in teacher motivation (8 or more out of 10), reaching an average value of 7.70 out of 10.

Table 12. Do you think that teachers in the schools included in the programme feel more motivated to carry out their educational work after their participation in ProFuturo?

2022		
Average	**Stan. dev.**	**% 8-10**
7,70	1,71	60,30%

Source: Coaches' survey

Having analysed the results according to the region of intervention, the difference between the perception of coaches in Africa is very clear, with an average rating of 7.36 and 48.96% of them with the highest rating (8 or more out of 10), compared to the case of Central America, with 70.59% and 7.85, or HISPAM with 8.00 and 69.29%.

60,30%
of respondents believe that the program increases motivation

Average rating

8,00
HISPAM

7,36
Africa

Methodological changes

Intensity and significance of the change

The Community of Inquiry (CoI)[5] analysis model, widely used in the scientific literature on technology-mediated education, identifies three main attributes in training in this modality: social presence, teaching (or didactic-technological) presence and cognitive presence, which corresponds to the role of expert in the subject of study. While the ProFuturo programme is technology-mediated and digital competence in teaching is essential, the ability to innovate and improve teaching practices is no less so, as it can lead to a significant improvement in students' learning experiences and outcomes. This is why it is so important to coordinate training plans that integrate cognitive, digital and social skills.

When teachers were asked to what extent they had modified the educational activities they carry out with their students´ using technology and digital resources, the results were generally very positive, with 87.20% of all teachers saying that they had modified their teaching practices.

Table 13. Have you modified the educational activities you carry out with your students, by using technology and digital resources, after your participation in the ProFuturo programme?

		2022	
		No	Yes
Overall		12,80%	87,20%
Model	Open	15,58%	84,42%
	Comprehensive	11,75%	88,25%

Source: Teachers' survey

5 Garrison, D.R., Anderson, T. y Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. The Internet and Higher Education, 2(2–3), 87–105. doi:10.1016/S1096-7516(00)00016-6

When the level of intensity of these changes was assessed, 34.84% of teachers considered that they had changed their educational practices "a great deal" and 41.05% indicated that they had done so "quite a lot". Conversely, 24.11% of teachers answered "a little" or "not all".

Table 14. How intensively/frequently have you modified your educational activities with students after your participation in the ProFuturo programme?

		2022			
		% Not at all	% A little	% Quite a lot	% A great deal
Overall		3,51%	20,60%	41,05%	34,84%
Model	Open	0,20%	21,40%	57,20%	21,20%
	Comprehensive	4,60%	20,30%	35,50%	39,60%

Source: Teachers' survey

After analysing the results by intervention model, there is a difference of 18 percentage points between the Open Model (21.20% consider that they have modified their educational practices "A great deal") and the Comprehensive Model, where 39.60% of teachers have given the highest score.

I like technology and now that I have the opportunity as a teacher, I like to experiment... I am starting to see other tools that I can extract from the tablet which I can use to help the children improve their learning. Because when ProFuturo came, they already came with programmes, and after the programmes you can now make your own material. So that's the advantage you have. The important thing about all this is that you can integrate areas... what we covered in a week of classes could be summarised in one day, in one class session and in a more interactive way.

Testimonial of a teacher from Zimbabwe

In both indicators, and when looking at the results by region, there is a statistically significant and favourable difference of close to 10 percentage points in the cases of Africa and Asia (94%) compared to the HISPAM (84%) and Central America (85%) regions, in the percentage of teachers who indicate that they have changed their methodological practice after participating in the programme.

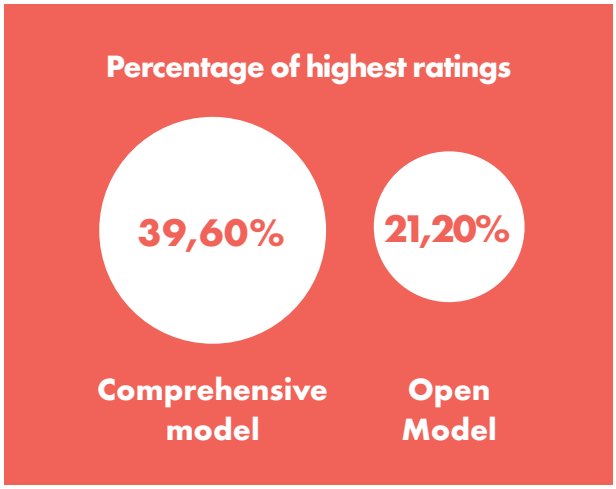
In relation to the differences by sex, age and educational stage, statistically significant differences can also be seen in the item that asks about the level of intensity of the change between men and women (40.22% compared to 32.41% of maximum ratings). By age, the greatest changes are seen in teachers under 40 years of age compared to older teachers (in the first case always close to or above 40% compared to the second case, where they do not exceed 30%. Finally, a better performance is also evident in Primary Education (37.20%) compared to Secondary Education (25.20%).

From the point of view of the coaches in the programme, the percentage of coaches who consider that there have been relevant changes in their teaching work after their participation in the programme is 71.54%, with 17.23% indicating that they have changed their teaching practice "A great deal".

Table 15. Do you think that teachers have modified the educational activities they carry out with their students, using technology and digital resources, after their participation in the ProFuturo programme?

	2022			
	% Not at all	% A little	% Quite a lot	% A great deal
Overall	0,37%	28,09%	54,31%	17,23%

Source: Coaches' survey



After analysing the responses according to the available variables, there are hardly any significant differences except for two of them. Firstly, older coaches ("50 years and older") are the ones who consider that this change has taken place to a greater extent (38.46%) and, according to the region of intervention, coaches from HISPAM show the lowest results (a maximum evaluation of 9.92%) compared to the team of coaches from Africa, whose percentage stands at 26.83%.

Active methodologies

Incorporating didactic proposals aimed at active learning through educational technologies

In order to better understand the methodological changes made by teachers in the programme, the survey aimed to identify the pedagogical practices that were most stimulated. The following table shows the percentages obtained in the teachers' responses according to the intervention model analysed:

Table 16. Percentage of teachers who report having made methodological changes according to the intervention model

Methodological changes	Open	Comprehensive
Research activities	81,50%	85,00%
Collaborative methodology or group learning	88,80%	90,00%
Project-based learning with your students	81,90%	78,90%
Activities using existing digital resources and content on the Internet	87,00%	87,40%
Activities using teacher-created digital resources	75,70%	78,90%
Activities where students create and produce digital resources	57,10%	70,00%

Source: Teachers' survey

In both intervention models, teachers gave higher values to methodological changes related to the incorporation of collaborative methodology or learning in groups and the implementation of activities using existing digital resources on the Internet. It is striking that in the case of the Comprehensive Model, teachers rated the methodological change related to the incorporation of activities where students create and produce digital resources the highest.

Similarly, in the case of the coaches, the proposal that they consider has been most promoted by the programme is the development of collaborative learning activities, with 71.43% of responses, followed by the use of digital resources developed by teachers (64.76%), research projects or activities (55.24%), project-based learning proposals (34.60%) and activities using existing digital resources and content on the Internet (29.84%).

71,43%

Development of collaborative learning activities

64,76%

Use of digital resources created by teachers

55,24%

Research projects or activities

6 Technology and ProFuturo solutions

What role do technology and ProFuturo education solutions play?

The technological resources made available within the framework of educational innovation, platforms, media and content, have a significant impact on the success of interventions. Established analytical frameworks in the Information Systems (IS) research context, such as the Expectation-Confirmation Model (ECM), suggest that both perceived usefulness and satisfaction, linked to the technological framework, are key factors in explaining users' intentions to remain in studies[6].

ProFuturo proposes complete intervention processes that integrate pedagogical aspects with technological aspects and with the logic of intervention, incorporating consulting actions in all phases: the design of actions, implementation and evaluation. This is done with interventions at institutional or state level as well as at classroom and teacher level.

In this context, digital pedagogical resources and platforms and means that facilitate interaction with the resources are key elements that make the content designed for the training of teachers, coaches, school principals and school children available.

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6 Zhou, J. (2017). Exploring the factors affecting learners' continuance intention of MOOCs for online collaborative learning: An extended ECM perspective. Australasian Journal of Educational Technology, 33(5). https://doi.org/10.14742/ajet.2914. Tiyar, F.R., & Khoshsima, H. (2015). Understanding students' satisfaction and continuance intention of e-learning: Application of expectation–confirmation model. World Journal on Educational Technology, 7(3), 157-166. http://dx.doi.org/10.18844/wjet.v7i3.

ProFuturo's in-house produced resources, both for teacher training and for children, maintain very high standards of quality. Their production involved the study and analysis of the different curricula of the countries in which the programme operates in order to define its own curriculum and a carefully designed pedagogical and methodological approach. All the contents have undergone a linguistic certification process with different reference institutes, for example, the Instituto Cervantes in the case of the Spanish language, and a technological certification process has also been carried out.

ProFuturo resources

The resources offered by ProFuturo can be classified as follows:

- Pathways for the professional development of coaches.
- Teacher training: Training pathways and proprietary platform.
- Classroom management platform.
- Classroom experiences: Educational resources and content for student use in class distributed through the classroom management platform.
- Equipment for schools (ProFuturo suitcase: computer, tablets, projector, router, and more).
- Project support, management and monitoring platforms.

ProFuturo resources are consumed in a variety of formats and channels: on the Platform itself, through offline consumption (mainly in the Comprehensive Model) and online (mainly in the Open Model). In most cases, ProFuturo provides the financial envelope for the deployment of the project and for the management of the local implementation team.

They are also consumed on other platforms of public or private institutions under specific licensing agreements, on television or radio.

ProFuturo services

For STUDENTS	Classroom experiences and ongoing technical support.
For TEACHERS	Training in the use of the platform, pedagogical support, teacher certification, guidance, development programmes and meetings between educators.
For SCHOOLS	Selection and training of coaches, community awareness, school diagnostics, adaptation of the programme to the destination.

Learning communities

The context linked to the COVID 19 pandemic particularly stimulated the creation of communities that have subsequently been maintained and strengthened. Experiences are mainly articulated around content curation, sharing of own experiences, peer to peer contact and support.

Main results

Below are the main evaluation results from the surveys of teachers participating in the Open Model (11,457), teachers participating in the Comprehensive Model (4,809), coaches participating in the Comprehensive Model (440) and students participating in the Comprehensive Model (117,976) during the year 2022.

It analyses the perception that teachers, coaches and students have of the value of the learning environments and content that ProFuturo provides in its interventions to accompany change in the teaching-learning processes in the classroom. These are the aspects reflected:

Usability of the virtual learning environment

Perception of the appropriateness and quality of ProFuturo content

Usability of the virtual learning environment

The evaluation carried out with teachers of the virtual learning environment generally shows a high level of satisfaction among teachers, with a rating of 8.25 out of 10 and 75.17% of ratings equal to or higher than 8.

Table 17. What is your opinion on the user-friendliness of the ProFuturo platform you have used with your students?

2022		
Average	**Stan. dev.**	**% 8-10**
8,25	2,18	75,17%

Source: Teachers' survey

After analysing the results by region of intervention, the ratings are higher for Central America and Asia (8.78 in both cases), compared to HISPAM and Africa (8.03 and 8.19 respectively).

No relevant or statistically significant differences were observed in terms of the sex or age of the teachers, although in the case of the level of education at which they teach, teachers in Secondary Education had higher ratings than those in Primary Education (81% of maximum ratings compared to 75% in Primary Education).

In contrast, the programme's coaches have a substantially lower rating (7.36 on average and 57.7% maximum rating). In this item, there is a favourable difference between HISPAM and especially Central America (7.88 and 8 respectively), compared to the that made by the team of coaches in Africa (7.25) or Brazil (4.82).

Average rating

8,78	**8,78**
Central America	**Asia**
8,19	**8,03**
Africa	**HISPAM**

The devices are a motivation for the school and make learning much easier for everyone. The absenteeism rate has gone down because pupils know that they may not have access to these tools everywhere.

The concentration and curiosity of the pupils, their level of autonomy has grown a lot and it was noticeable in everyone's mood.

Testimonial of a head of school from Guatemala

Table 18. What is your opinion on the user-friendliness of the ProFuturo platform that teachers in the schools you support have used?

2022

Average	Stan. dev.	% 8-10
7,36	1,96	55,56%

Source: Coaches' survey

In the case of students, the perception of the ease of use of the tablets and the platform is very positive (75.03% of maximum ratings, value 4 on a scale of 1 to 4). There is a statistically significant higher rating among students in Primary Education compared to Secondary Education (75.33% vs. 68.36%).

Table 19. Tell us if you find the Tablet simple and easy to use when doing activities in class.

2022

Not at all	A little	Quite a lot	A great deal
0,98%	4,30%	19,68%	75,03%

Source: Students' survey

Average ratings

8,00

Central America

7,88

HISPAM

75,03%

Highest ratings on the ease of use of the tablets

75,33%

Highest ratings on the ease of use in Primary Education

Perception of the appropriateness and quality of ProFuturo content

Regarding the perception of the appropriateness and quality of ProFuturo content expressed by teachers and coaches, we first looked at the perception of teachers according to the content areas of the resources used.

Table 20. Rate the usefulness of the ProFuturo content you have used with the students.

	2022		
	Average	**Stan. dev.**	**% 8-10**
Science	8,59	1,87	78,69%
Mathematics	8,44	2,05	75,67%
Language	8,59	1,91	78,65%
Technology	8,59	1,88	79,06%
Ways of thinking and acting	8,50	1,94	77,15%
Principles for healthy living	8,55	1,92	77,80%
Citizenship and peaceful coexistence	8,46	2,01	76,44%

Source: Teachers' survey

Overall, ratings are high and consistent across all content areas. Thus, in terms of usefulness of content, the ratings for all content areas are between 8.4 and 8.6 out of 10.

8,4 - 8,6

High and consistent ratings across all ProFuturo content areas

One of the changes we noticed in the students' learning is that they opened their minds to new learning opportunities, so sometimes, we as teachers would think that they are like, simply playing on the tablet.

However, their mind is making a connection between what we are explaining to them and what comes from the interactive learning they are experiencing, right? I've had addition, subtraction... multiplication, problem solving, right? We have seen the improvement and they have developed cognitive skills that have been very, very important and we have seen that palpably in the assessments and in the classroom.

Testimonial of a teacher from Guatemala

Analysing the results according to region of intervention, the ratings fall in Africa and HISPAM, where the maximum rating of 76% (8 or higher) is not exceeded in a single case.

From the point of view of the age of the teachers, significantly lower ratings are found in the group of teachers between 30 and 39 years of age, with higher ratings in general, especially from the age of 40 onwards.

Finally, in relation to the educational stage at which the teacher teaches, significant differences can be seen in all content areas, with higher differences in secondary education compared to primary education, although it is necessary to consider that the latter educational stage has a much higher volume of surveys collected.

76%

Highest ratings from Africa and HISPAM

> 40 years

Group of teachers with the highest ratings

Including the evaluations of the coaches, we find, in general, a lower evaluation than that given by the teachers (7.16 out of 10 and 49.52% of evaluations equal to or higher than 8) in terms of the adaptation of the contents to the students' needs.

Table 21. Do you think that the ProFuturo contents are adapted to the learning needs of the students in the schools you serve?

	2022		
	Average	Stan. dev.	%8-10
Overall	7,16	2,15	49,52%

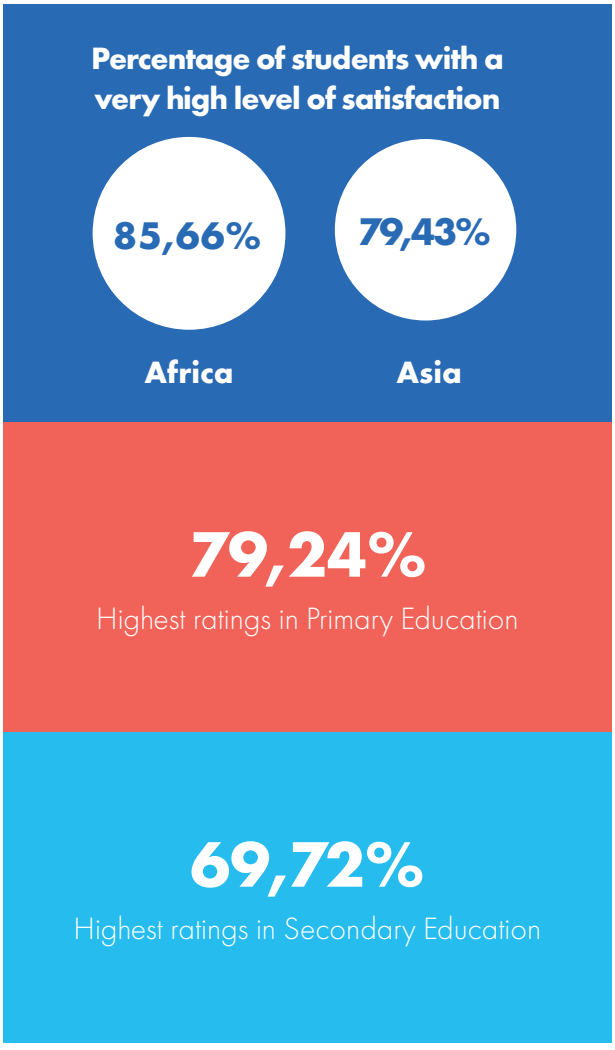
Source: Coaches' survey

Consistent with what is expressed by teachers, Africa has the lowest significant ratings (6.61 and 38.54%) compared to Central America (7.97 and 64.71%). However, when asked about the quality of the content, the ratings are higher (7.71 and 59.69%).

Students, however, express a very high level of satisfaction with the didactic resources (images, videos and activities) proposed in the Classroom Management platform, with a percentage of more than 75% of maximum score in Africa (85.66%), Central America (76.14%) and Asia (79.43%). HISPAM shows the lowest rating, reaching 71.40% of the total number of respondents with the highest ratings.

In addition, significant and favourable (but not interpretatively relevant) differences were found for boys versus girls, students under the age of 10 and those aged 13-15.

Finally, it should be noted that the difference found between Primary Education students (79.24%) and Secondary Education students (69.72%) is significant and relevant.



7

Programme opportunities and challenges

The 2030 Agenda envisages quality education as a key goal for sustainable development, considering that the education of girls and boys has a significant influence on eradicating poverty and generating equal opportunities. This publication presents the main results obtained in the programme evaluation surveys carried out in November and December 2022 by the ProFuturo Foundation among teachers, coaches and students.

The main findings in relation to the teachers' professional development as a result of their participation in the ProFuturo programme were as follows:

- There has been a significant increase in the motivation of teachers, who show greater interest in improving their teaching profile and in developing their everyday activity.

- There is evidence that teachers perceive themselves as being able to develop active methodologies which they in fact transfer to the classroom and bring about an improvement in the learning process.

In relation to the educational development of children through their participation in the ProFuturo programme:

- There is a significant increase in student effort and improved understanding of the subjects studied, which has a significant impact on both individual development and equal opportunities. Children feel more empowered and capable of tackling other stages of learning that were not previously on the horizon.

- In addition, the study found that students and families are motivated. This commitment is a determining factor in attendance and the reduction of absenteeism. It also reflects results that demonstrate the capacity of students in a framework in which new opportunities for development are facilitated.

Lastly, in terms of technological solutions and programme content:

- Both teachers and children consider the technological solution to be adequate and useful, although the coaches give substantially lower ratings, and it will be necessary to have this contrasting data for future studies.

- In terms of the perceived appropriateness and quality of ProFuturo content, overall, the ratings are high and consistent across all content areas, with the rating obtained for technology-related content standing out.

Based on these general conclusions obtained from the use of this battery of surveys, there are different challenges that the ProFuturo Programme may have to face to ensure its sustainability and improve its educational results.

Firstly, the sustainability of an intervention of these characteristics depends on continuing to contribute to the school and its community appropriating the project, as well as generating local alliances that strengthen both resources and adequate institutional support.

Secondly, the methodological transformation of teaching practices is a progressive and continuous process, which requires maintaining and adapting training efforts and support for teaching teams so that they gain in autonomy. This includes strengthening the figure of the teacher leader or innovation teams in the school as the driving force for change.

Thirdly, in order to ensure the greatest effectiveness of the educational resources and content provided by the programme, continuing to strengthen the ProFuturo technological solution for its deployment in an off-line context and in 4 languages will be necessary, while taking into account the challenges that this entails.

Finally, the existing differences in the societies and education systems where ProFuturo intervenes seem to point to the need to adapt the programme's resources and contents to the context of Africa and Asia further, generating in turn new challenges and an evolution of the programme for the Latin American context.

The analysis of the results obtained in this study has shown how ProFuturo provides a framework of alliances with the capacity and experience to strengthen education in countries and regions through technological mediation. It provides platforms, media and content, and has a training deployment with the aim of strengthening and providing training in order to guarantee autonomy after the intervention.

The support of an institution such as ProFuturo is intended to help those responsible for the development of educational policies to make the necessary efforts for the correct implementation of innovation and improvement plans of the educational system, without which the global gap will continue to grow.

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