



MENTORING SCHOOLS NETWORK LATIN AMERICA

A network diagram with several colorful nodes (pink, blue, yellow, orange, green) connected by thin white lines, overlaid on the central figure of the woman.

RED DE
ESCUELAS
MENTORAS
LATINOAMÉRICA

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Unlike a team whose path has been outlined from the beginning, a community develops over time, without a predetermined end point. Many communities begin their existence on a temporary basis, with a frail sense of why they are together and with modest technological resources. Over time, they continuously reinvent themselves. The understanding of their domain expands. New members join, others leave. Their practice evolves. (Wenger, White, & Smith, 2009, p. 11).

Summary

This document describes the lessons learned, the history and how the Mentoring Schools Network in Latin America, an initiative financed by Microsoft and supported by Grupo Educativo, works. The network, founded in 2013 with 7 schools in Latin America and the Caribbean, now has 52 schools in 11 countries in the region. In its fifth year of operations, we sought to compile its history, the changes it has undergone, and the developments that have been necessary to continue growing, in order to inspire the creation of more and similar initiatives. The document is divided into three parts. First, we present the purpose of the network and the interest that brings together its participants. Secondly, it describes the structure that enables the support among schools to overcome common challenges. Third, we present practices developed inside its schools and how they collaborate with each other. Finally, to conclude, the network's projections of becoming a more autonomous organization.

Introduction

Our institutions are based on the assumption that learning is an individual process, that it has a beginning and an end, that it is better to separate it from the rest of our activities and that it is a result of teaching. Thus, we design our classrooms so that students are isolated from the distractions produced by their participation in the outside world, allowing them to pay attention to their teachers or focus on exercises. To assess their knowledge, we use tests where each student must fight in a one-on-one combat, proving their knowledge out of context and where collaboration is considered cheating. [...] But what if we adopt a different perspective; one that positions learning in the context of our experiences obtained from participating in the world? What if we assume that learning is part of human nature, just as eating or sleeping, that it is essential to life, inevitable and, given the opportunity, we are quite good at it? (Wenger, 2008, p. 3).

The Mentoring Schools Network in Latin America is the result of a specific and innovative way of understanding education, learning and the role that schools should play in this process. This is not a conglomerate of schools or educational institutions, nor is it a group of professionals in education. The network is a new way of understanding education, where the knowledge of teachers, administrators, students and their families, goes beyond the barriers and boundaries of their classrooms and institutions. No one is surprised that students are separated in classrooms where they are expected to repeat the content instructed by the teacher. This content, completely taken out of context from its application, is measured and used to establish differences between students, selecting the "best" from the "worst". Questioning this paradigm of traditional education is increasingly frequent and the network in part of the proposals that address this problem.

The network sees education as a process that breaks down the artificial barriers of the traditional model, among different classrooms, schools and their context,

allowing students to apply their learning experiences in the real world. From an inclusive and global vision of the school, the Mentoring Schools Network in Latin America allows schools to share experiences that go beyond an individual teacher or student, developing solutions systematically aimed at the challenge of learning in the 21st century.

From the very beginning, its founders were clear about the skills students need in an information society. Indeed, society has changed, not only in terms of the information available but also in terms of the social, economic, work-related and cultural way in which we understand it (Pedró, 2011); it requires the development of new skills and an in-depth learning processes applicable to different contexts (Fullan & Langworthy, 2014). Although each of the founding schools made separate efforts, the network has managed to coordinate the actions of different actors from different contexts around the same purpose: **to change education in the region through a new approach based on a solidarity matrix.** This idea, which began from the natural intuition of seven

schools that shared the same concerns, has gradually converged and materialized over the course of the network's five years of work.

This first approach, which gave way to the network's first working team, is the spirit that remains to this day and has grown to reach fifty-two schools in eleven countries in Latin America and the Caribbean. From a theoretical standpoint, a learning community such as the Mentoring Schools Network in Latin America has three important components: (1) its domain, or areas, (2) the supporting community among its members and (3) its practice or implementation (Wenger et al., 2009). Community **domain** makes reference to the shared concern of its members. It is normal for this to be transformed, eventually, into certain concrete elements over time and throughout the lifecycle of the community. The **supporting community** represents the ability to meet and recognize each other, among other people and schools that have the same concerns. This second point is the one that allows a network experience to take place, represented in a friendship and brotherhood among the members of the community. Finally, community **practice** represents its tasks or the interaction of its members with the domain in question. In this case, it is not a theoretical concern, but rather a question of how they can find answers based on school problems.

In summary, this document describes the evolution and conclusions of the network in these five years of work. With regards to its **domain**, the network has consolidated four topics that are relevant when addressing the improvement of the learning processes in the region. **Chapter 1** presents each topic through a case that provides context to the work done by one of the schools in the network regarding such topic. The four topics are:

1. Inspiring knowledge through robotics and video games.
2. Equitable education within contexts of inequality.

3. Teaching skills development.
4. Using ICTs in the implementation of new pedagogies.

Regarding the network's role as a **supporting community**, **Chapter 2** describes how the network has evolved to deliberately promote a positive relationship among its members by developing knowledge-exchange activities among schools. Over the years, the network has consolidated a structure for each of its activities that fosters fellowship for learning. We hope that the experience of this network will be useful for the creation and consolidation of networks and learning communities in the region.

Finally, regarding the evolution of its **practice**, the network has systematized different projects that report on the performance of the schools' activities. At the beginning of the network, one of the first activities carried out was the creation of teams among schools with different projects and interests. Only by sharing the need and urgency to improve their students' learning process, did each school succeed in enriching its projects based on their differences. This collaboration, based on differences, but harmonized through the passion for transforming education, has been the network's hallmark since its foundation. These practices support the whole network through seminars or "Thematic Meetings" where the results of each experience are presented to the whole community. Today, the network has systematized these experiences and presents them in **chapter 3**, organized into the four topics of the domain described in the previous chapters.

1. Domain: Educational Issues

Over the years, the network has reached an understanding of its shared concerns, which has been progressively consolidated through the exchange and participation of schools. While initially schools shared the need to prepare their students to succeed in this century, there was no agreement on the critical points of such transformation.

After all the activities carried out, patterns and knowledge were generated based on the participants' own experience. As schools developed projects with members of the network, participated in exchange meetings and advanced in their own innovation projects, it became clear that there were common issues among different institutions and countries. The convergence of these issues allowed individual efforts to become common concerns.

These issues played a guiding role in the schools' work as they were formalized in development lines. With their support, initiatives were developed, and different experiences were shared. The progressive interest that schools had in addressing these topics fueled the interest of more advanced institutions to share their own experiences of success. This knowledge has been documented by the participating institutions themselves, establishing the issues or topics that we will present below.

The presentation of each topic begins with a description showing its progress in one of the schools of the network. The following is a description of the network's approach to the issue and its importance in improving the learning outcomes of students in the region.

1.1 Inspiring knowledge through robotics and video games

International assessments show that countries in the region are facing the challenge of improving the quality of their education systems to meet the learning standards expected from children and young people. In addition to this, there are also high dropout rates, partly due to the discrepancy between the expectations of youth and what the schools offer; something education systems of the region must address.

In this scenario, where there is a need to increase learning outcomes, and to attract and maintain students in the education system, is why teaching using robotics and video game development has emerged as a response to solve this problem. Through this approach, schools have been able to address both issues together, understanding the robotics and videogame workspace as a something that contributes to skills development and attracts students with its learning process.

Thus, through robotics and video game development, schools have implemented different strategies, such as: (1) building robots to solve everyday problems, (2) developing educational video games for kindergarten children, (3) designing video games that, later on, are made available for sale, among others. This approach has been particularly successful for schools in the network. This is shown through experiences that are repeated, deepened and that have progressively caused interest in new schools.

ORT Technical School, Argentina **Challenging and motivating spaces for learning purposes**

At the ORT Technical School, the subject of video games and robotics has been addressed from different perspectives. The purpose is to build motivating and challenging spaces for learning purposes. At school, video games are used as didactic strategies considering two different perspectives.

The first one, is the use of existing video games to work on the curriculum. For example, we can mention teaching compulsory content such as “logic gates” using Minecraft video game. This approach allows us to address the curricular content based on something known to students, incorporating an increasing level of difficulty with a good balance between the challenge posed and the possibilities of student’s success.

A second strategy, led by the “ICT Guidance”, uses the project-based learning method (PBA). In them, all our students must carry out an annual group project inspired by a request from the community, the school or a personal interest. As an example, we can mention the video game Rehand requested by the Neuroscience Institute of Buenos Aires (INEBA) for the rehabilitation of people with difficulties in their upper limbs (a video can be seen showing how it works on YouTube: ReHand - 2014 Sudilovsky Busel Award <https://youtu.be/buOst1-pb2E>).

In the case of robotics, there are extracurricular activities where students can work to create robots to participate in both local and global competitions, where they must solve different situations using commercial kits or their own developments.

1.2. Equitable education within contexts of inequality

“Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” is the education goal of the United Nations’ Sustainable Development Goals (Rieckmann, 2017, p.18). Progress towards this goal is particularly relevant in a region where systemic inequalities exist and where education plays a key role in maintaining vicious circles of segregation.

In countries with significant levels of inequality, such as those in our region, we identify that there are innovation experiences to address education differences. A common interest in offering quality education regardless of the socioeconomic status of students and their families, is what brings these experiences together.

These socioeconomic differences in the region, which are traced back to colonial times, in scenarios of low social mobility, become evident through segregation. This segregation in society reaches schools, which are institutions that reproduce this situation and rarely provide meeting places for students and families from different socioeconomic status; consequently, the creation of separate schools for the rich and the poor is observed.

Within this scenario, it is uncommon to find schools that think of themselves as spaces that integrate students from different socioeconomic levels, and there are rather exceptional experiences. A relevant part of the challenges faced by these institutions is related to addressing the gaps among their students due to their diverse previous educational

Montebello Academy, Ecuador **The school as a space for social integration**

Schools in Ecuador are not the exception of socioeconomic segregation; in fact, there are elite educational institutions that, reinforcing this idea, help poor children and young people by lending them their facilities so that, in a different schedule, they can use their classrooms.

Our proposal is innovative in Ecuador, bringing everyone together in one place and at the same time, which is beneficial for both our students and their families, regardless of their socioeconomic status. This combination creates other types of learning processes, which are not necessarily considered in the original design of the curricula.

A concrete example of this type of learning process is that, although parents voluntarily choose Montebello knowing that their children will share their daily lives with peers from other socioeconomic status, some of them are making a difference along the way. In other words, parents sometimes are unable to free themselves from segregation and historically entrenched ideologies, making our challenge become more than addressing gaps in prior learning patterns. However, it is the students, their own children, who help us overcome this obstacle. They are the ones who teach their parents to open up, so that they can learn to accept, in a more natural way, the relationships within a heterogeneous environment. This has such a deep effect and to such an extent, that wealthy families often invite their children’s friends to visit beaches, vacation camps and generally have experiences that are financially limited for those who can afford them.

In this way, a profound change is achieved among all the members of the Montebello community; a change that guarantees that this dream exceeds the time that the students remain in our institution and becomes a life project for everyone.

experiences, originated by the different family and social contexts in which they are inserted. In strong segregation situations, these individual differences are accompanied by the need to work on student and family integration, who are not accustomed to meet in common spaces.

The solutions and approaches observed in the network to address this issue, vary. There are some experiences of private schools that seek this integration in the same educational space through differentiated tuition or scholarships, combined with an admission processes that recognizes the differences in students' socioeconomic backgrounds.

On the other hand, there are educational institutions specially designed to attend to young people of intermediate and low socioeconomic status, and to provide them with an education equivalent to that received by children and youth in the private system, which is paid for by the richest sectors of the population. Despite the different strategies that can be identified, these schools have a common purpose: offering an education that integrates students of different socioeconomic status, providing quality education for all.

1.3. Teaching skills development

There is academic consensus on the changing nature of pedagogical effectiveness regarding learning achievements in education systems (Reynolds, 2005). The report prepared by Barber and Mourshed (2007), focused on recognizing the mechanisms that education systems use to achieve the highest levels of learning outcomes for their students, emphasizes the importance of teacher development and training.

With regards to the role of the teacher, the “New Pedagogies for Deep Learning” model (Fullan & Langworthy, 2014), proposes the need to make a transition from an education based on the transfer of content, to one that develops meaningful, profound and student-oriented learning processes. With this new education process, the role of the teacher is not to be an expert in contents such as mathematics, history or English. On the contrary, it is expected that students will be able to discover and create knowledge using technologies. In this new paradigm, a teacher must have a broad repertoire of teaching strategies as well as the ability to develop partnerships with students. In other words, the teacher has to be an expert in how students learn, putting this function at the heart of his or her work as a teacher going beyond transferring content. This is what Fullan and Langworthy (2014) call pedagogical capacity, which is described in Figure 1 below:

Josefa Campos School, Colombia Junior English Club

There is a shortage of qualified staff to teach English as a second language, which means that there are teachers who are required by the education system to teach English, but do not have a good command of the language or its didactics. This means that students do not receive an adequate instruction to meet the minimum standards of English. The latter is confirmed by studies such as the one recently conducted by the Center for Regional Economic Studies from the Bank of the Republic of Colombia, which indicates that only 2.4% of high school graduates and 6% of university students in the country are proficient in the use of English.

Among some of the proposed solutions to address the deficiency in the teaching-learning process of English, is the use of Information and Communication Technologies (ICTs) as supporting tools (especially in the e-learning proposal). The result is that today, we have an overwhelming offer of programs for this purpose (Duolingo, ABA English, Wlingua, Babel, Poma Rosa, Open English, Om personal, among many others). Most of these are free of charge for the first levels; however, after a period of use and/or acquired skills, in order to continue using them, it is necessary to pay a membership fee (which is often expensive), creating a first barrier to their massive use in the teaching of English to both students and teachers.

The Josefa Campos school does not escape from the reality in Colombia previously described. There is also an additional problem: the low level of motivation in students to learn this language, which translates into the perception of English classes as one of the “problematic” subjects in school. In terms of learning English, tests passed by the Colombian Institute for Educational Assessment (ICFES) have shown that the English area is one of the most deficient areas in the school.

In this context of low English proficiency, lack of motivation in students and poor learning outcomes on national exams, the Junior English Club was conceived as an innovative proposal to tackle this problem. The club is constituted as an alternative space of the normal class, in which elementary school students will develop communication skills in a second language, with the support of ICTs, such as: Skype, OneNote, Office Mix, Movie Maker, Word, Goanimate, Calameo, among others.

This situation changes the roles of teachers and students; the teacher is presented as one of the members who also learns alongside the students and everyone works based on a common interest. The activities are also proposed by the members of the Junior English Club, where the adult is a facilitator of the learning process, guides the activities, prepares the material and each one of the sessions; achieving an active and participatory dynamic that allows the student to build his or her knowledge according to his or her interests.

Figure 1: How the New Pedagogies are Different

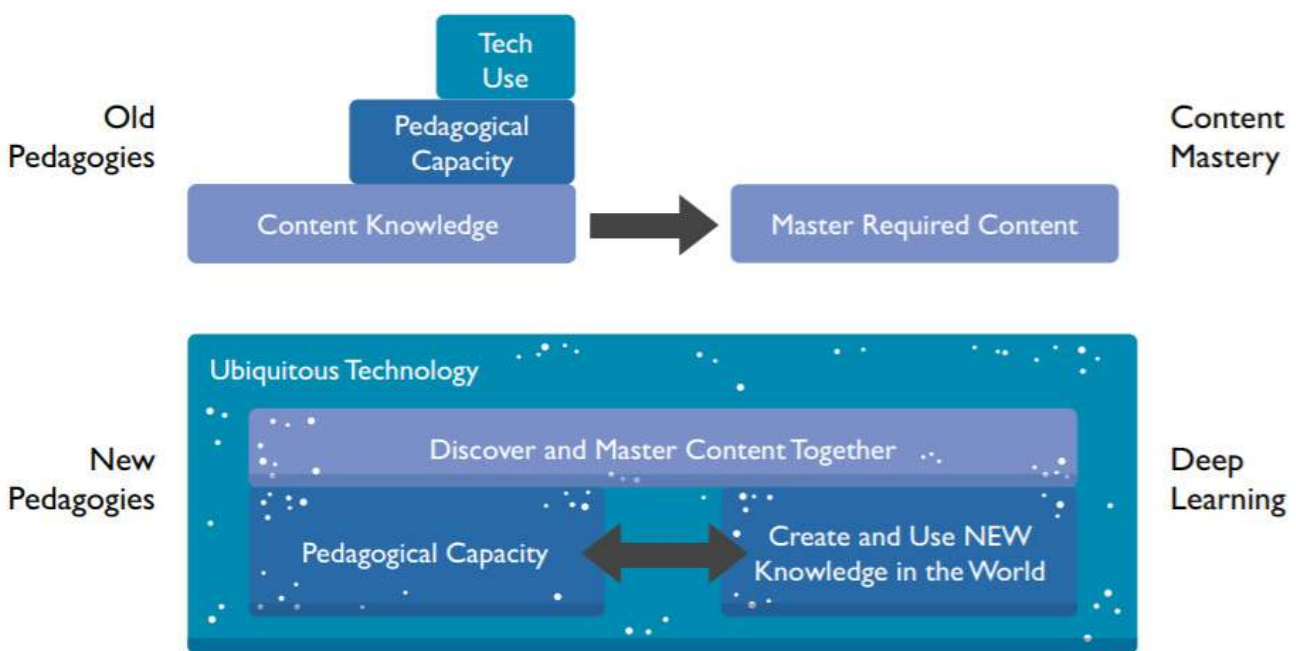


Fig. 1: Diagram of New Pedagogies
Source: Fullan and Langworthy (2014)

In the region, this challenge is fundamental to improve the learning process quality for all students. The network has developed this topic through different activities and monthly seminars focused on the

development of these capacities. The structure of the activities and their specific objectives are described in **Chapter 3**.

1.4. Using ICTs in the implementation of new pedagogies

The Latin American region is characterized by a high geographical and economic diversity among the different countries, and there are also important differences between areas of the same country. This has a significant impact on the potential access and quality that communities and schools have to Communication Technologies (ICTs) This, in turn, limits possible technological implementations and opportunities for teachers and students at school. Thus, while some schools have implemented 1:1 access for thousands of students, others have installed overhead projectors and computers in all their classrooms or have decided to set up computer and robotics laboratories.

In addition to the access opportunities, the schools' environment also plays an important role when using learning technologies. Depending on these environments, we find schools where ICT plays a fundamental role in skill development and certification that use technology to respond to the demands of the production sector and to provide rapid access to the labor market, while in others, the use of technologies emphasizes the acquisition of higher-level thinking skills such as problem-solving or critical thinking.

In this way, the schools' environments influence both the technological implementations that are carried out as well as the use of ICTs for learning purposes. However, beyond the differences in access and the objectives of these implementations, all the schools in the network understand that the context has changed and that they are facing a common problem: how to use ICTs effectively to improve the learning/teaching

ORT Technical School, Argentina Pedagogical Model 2.0

In our permanent search to maintain an updated pedagogical offer, in the 2011 school year, we started a new and ambitious project, which we call the Pedagogical Model 2.0.

It is under this project that, from the first day of class, each of our first-year students received a mobile digital device to have access to the materials created by the teachers themselves. Considering the traits and interests of today's children and young youth, the new model is geared towards the training needs of tomorrow's university students, workers and citizens. The model seeks to enrich the communication, interaction and learning processes of its students, using as a frame of reference the new paradigms related to knowledge management and based on the possibilities offered by the development of the web. The model is developed on the basis of four working axes:

1. New interactions, new technologies

This model favors changes in teaching strategies, modifies class dynamics, makes work spaces more flexible and expands learning scenarios, creating continuity between the school and other spaces: houses, museums, libraries, laboratories, universities, other schools, etc. Information transfer is no longer relevant, and priority is given to processes of research and investigation, validation and comparison, transformation and production, interaction and collaboration.

2. Cloud support for educational services: ORT Virtual Campus

Since its inception, the ORT Virtual Campus has been conceived as a large space where teachers and students use 2.0 tools to improve learning and teaching processes, a customized environment that is integrated into the school organization. As support to the educational

processes of teachers and students?

As described in Figure 1 of the previous topic, an effective use of ICTs must be at the core of the education system, supporting or leveraging different learning processes. The aim is to encourage students to become true researchers and knowledge creators, rather than mere consumers of information (Fullan & Langworthy, 2014). This is key to understand how to implement technology to be used rather than consumed, i.e., technology that benefits everyone and that seeks to close the second digital gap (van Deursen & van Dijk, 2014). Finally, a real change in education occurs when students are able to create new knowledge and apply it in real settings, allowing them to acquire truly profound learning that they can use in different contexts and that will change their lives.

services, each subject has its own space where not only the teacher publishes the activities, but also students present their productions and learning activities.

3. Training the teachers

The ORT school develops a continuous training plan for its teachers, both technical and pedagogical. For this purpose, different work and training spaces are used: plenary sessions to share teaching experiences, workshops, customized tutorials, and virtual advice. The product of the training should be an educational development to be used in the classroom.

4. Flexible infrastructure and secure connectivity

For the implementation of the Pedagogical Model 2.0, the classrooms, workshops and laboratories were equipped to provide the flexibility and modifications necessary to promote different working methods. This design allows for dynamic organization in lectures, working in groups or individually, and the development of diverse work methodologies.

2. Supporting Communities: A Facilitating Structure

A learning community is nothing without the support among its participants. In the case of the Mentoring Schools Network, the question is: how can we improve and facilitate the support between schools? The answer to this question has not been easy to find and has evolved with experience and over the years. Despite the changes, the same idea remains: to have a structure that encourages exchange and collaboration, that makes the learnings of each school and participant visible in order to find the right support. As explained in the previous chapter, the objective has always been to break down the walls that separate the different actors of the educational process. This chapter reviews the history of the network, the evolution of its structure and the experiences that justify changes in the organization, keeping the objective of making it easier for a school to find the support it needs.

The network started with a simple idea: schools presented innovative education projects to improve student learning. Each project was different, regarding theme and methodology, but it required self-examination to decide the area that the school needed to transform. These early initiatives include the implementation of one-computer-per-student, teacher training programs, peer-to-peer conferences, and the use of technology to transform classrooms, and implementations of personalized pedagogical models to develop of 21st century skills. The seven schools that participated in his initial process were:

- Escuela Pública Digital Albert Einstein (Argentina)
- Escuela Municipal André Urani GENTE (Brasil)

Rural District School Silvia Cotes de Biswell, Colombia Educational Kinect

Rural District School Silvia Cotes de Biswell is located in the rural area of the municipality of El Banco, Colombia, in a sector of high vulnerability and low schooling levels among parents. This context poses significant challenges for the school in attracting and retaining students, as well as achievements in learning.

In this scenario, we began using Kinect devices in the school to carry out educational activities using games; an initiative known internally as “Educational Kinect”. We have guided the use of video games as a pedagogical tool to facilitate learning, obtaining important results in terms of students’ motivation to attend classes and preventing them from dropping out. Playing with Kinect created an expectation in students and allows them to learn in a playful way almost without realizing it. It has also been considered a strategy to bridge the digital gap between the urban and rural areas.

As part of the work we have been doing, incorporating the Mentoring Schools Network has been a valuable contribution to our work at the school in two ways: the first one is associated with the opportunity to share our experience with other schools in the region; and the second one, to the possibility of learning about other experiences that have contributed to our work.

Our experience at the school has been relevant in terms of how students from rural areas with a low social and economic status and few opportunities to access and work with technology, approach it. The location of the school and the environment have inspired other schools in the network, showing them that this does not prevent them from using technology for learning activities.

On the other hand, the network has also allowed us to open new possibilities for action. At a school meeting with Notre Dame and St. John’s School we had the

- Nave Recife (Brasil)
- Saint John's School (Chile)
- Montebello Academy (Ecuador)
- Escuela del Deporte de San Juan (Puerto Rico)
- Notre Dame School (Dominican Republic)

In this **first stage**, when each school presented its enhancement project, the first significant element was defined, which would mark the network's fate. It was agreed, at an early stage, that it would be the schools themselves, with their experiences and daily practice, the ones responsible for advising each other and that they would have the necessary expertise to move forward with the school transformations they desired. The role of the Grupo Educativo would be that of a steward or facilitator for the schools in the network.

After defining this, a first model of work between schools in the network was developed. This was an exchange, where a school acted as interviewee for the peer group, asking questions to understand the challenge in order to prepare a collective hypotheses and approach strategies. Each meeting had the following structure:

- 1. Initial interview:** Description of the challenge considering the context, understanding and evidence of the school being interviewed. Also, strategies that they have tried in the past to address the problem and the results that they've had, are included.
- 2. Feedback and hypothesis formulation:** Development of a scheme or problem tree about learning issues, difficulties and hypotheses, done by the peer group.
- 3. Suggested strategies for resolution:** Ideas, resources or support from the peer group.
- 4. Commitments:** List of commitments for the peer group and the school interviewed. Development of action plans for long-term work.

opportunity to learn about the experience they and their secondary school students had with video game development by high school students. This has opened new perspectives for us regarding the use of video games for student's learning, in an area that, to this day, our teachers and students hadn't worked with; not only playing video games to learn, but also programming videogames as a teaching/learning strategy. The possibility of learning about the work done by these two schools made teachers in our school think. We've contacted Notre Dame School's principal, Maria Lorraine Ruiz, to learn more details about their work and to assess new ways of using Kinect and Xbox in students' learning at our school.

This has been of special value and interest to us, as it allows us to deepen an aspect of video games' use in education that we value, which is related to the development of students' creativity. We believe it is an amazing possibility that we would like to implement, and it shows the value of collaborating with other institutions to continue improving.

With the support and strategies suggested by the schools, they are encouraged to continue work and improve; each school in their own project. They shared problems and triumphs. Each school was inspired by the passions and interests of their peers, modifying their ideas and creating convergences in a natural way, regarding the way they understand a network should work. It was more and more obvious that schools created a bond as they all shared a sense of urgency and a passion to transform their students' learning. Even when a problem was addressed from different perspectives, the domain was the same. At this time, the idea of founding a collaborative network emerged naturally, based on a need.

When it became a formal network and as more schools were invited, it kept the characteristic of the first 7 founding schools. The idea was to assist and support the growth of each school and each professional that participated in the network; that even though each one of them is special and has different interests, creating spaces for collaboration and support, enriches all with new ideas. The passion and motivation of others, help everybody reflect and create new ideas, adapting them, to each reality. In this phase, we consolidated 4 new ways to collaborate:

- 1. Innovation projects:** is the development of materials that make each school's innovation plan, a reality. Usually they are carried out by different schools which agree to become responsible for certain objectives and foster experience exchange among its members. Working on them, allows participants to obtain an initiative design and execution model that lets them to work in global contexts which respond to diverse work cultures. Likewise, they promote remote team coordination and interschool project management skills among leaders.
- 2. Innovation training:** periodical meeting opportunities among schools, using thematic meetings aimed at building skills to strengthen

a permanent change and progress environment among them. The objective of this component is to keep the institutions updated, in the areas of educational trends that they believe are more relevant, as well as encourage closer links as they acknowledge similar interests among them. Among their main objectives is reflection on cutting-edge pedagogical topics, using abstraction and synthesis of practices carried out in those schools. Furthermore, it encourages the effective communication of experiences using technological tools.

- 3. School transformation practices:** After systematizing an innovative practice carried out by the school, they prepare a document with a predefined structure to disseminate the strategy within the school and in the network. The structure ensures that this practice has objectives, indicators and processes which make it possible to critically analyze its implementation and scope when addressing different problems.
- 4. Latin American topics in education:** convergence of local topics that are applicable in the region. The learning objective has been to access and evaluate in a critical manner, the information related to cutting-edge topics of pedagogical innovation. And more value is added based on the schools' capacity to lead in collaborative knowledge construction opportunities using online strategies. Specifically, the activities associated to that, respond to the creation of texts to be shared and the use of them acknowledges a variety of contexts and cultures.

In practice communities, the understanding of their domain is deepened with new experiences, which leads to question the structure. When we mapped each participant's pathway in the network, it became clear that a healthy network required a balance in the opportunities for individual participation and school's participation as the formal institution. This will

guarantee that network participants have a practical and active connection with the network's domain. This is how the current network configuration came about; it is based on the individual pathway, as well as the school transformation pathway. With assistance or stewardship, this new model allows learning enrichment at each school, organizing them and creating a layer of metacognition which facilitates that each member of the community connects and participates in the discussions relevant to their challenges.

Below, we describe the current structure that is the result of experiences and learnings after 5 years of collaboration. The structure is divided in three levels: (1) General objective, (2) Principles, and (3) Activity framework. The network's general objective is:

To support innovation and education quality of schools in Latin America through an autonomous network that works with institutions in an inclusive manner.

This objective establishes that, all activities carried out as part of the activity framework, must collaborate and support the quality of learning through school transformation. In order to meet this objective, there are principles which describe, in a more specific way, the network's activities.

2.1. Network principles

Collaboration. Consolidate a community that works in a permanent and sustainable way towards a common purpose, becoming a space for mutual support in which participants can share their concerns and create initiatives to address the challenges presented by schools.

School transformation. Promote changes that foster capacity building in schools to implement a new pedagogy and with it, generate profound knowledge among students. In the network, this element proposes the development of experiences that have an impact on the teaching quality of each school. To this end, each school needs to follow a clear learning direction and based on it, it must build internal capacities required to support innovation and implementation processes in their education community. Thus, school transformation is understood as a process that, as schools develop activities that are increasingly reflective and oriented towards a particular focus, their practices change around an increasingly deeper learning. However, we recognize that this proposal poses a challenge for schools, because it requires that they manage their continuous improvement needs and that they identify possibilities that allow them to achieve new and better learning outcomes. (Fullan, Quinn, & Adam, 2016).

Reflection and pathway. Brings together analysis and concern about teaching practices, school management and participation history, making the progress and learning achieved, visible. Learning pathways are sequences planned for each work focus determined by the school. In the network—

consistency with the objectives of collaboration and school transformation—is how schools and individuals develop a learning pathway, as they show changes in their senses, practices and materials, applying actions that respond to transformational objectives, thus being able to change their customary practices.

Then, expected progress starts when a participant studies an issue in their school; and, as he/she moves forward in his/her pathway, this person negotiates the position in the community, developing and/or adopting strategies that address the topic and that he/she learns by working with other colleagues and members of the network.

2.2. Activity framework

With the purpose of promoting specific work based on structural elements of the network, strategies were designed, that guide possibilities of activity within itself. Among these, the ones that stand out and influence the logic used by schools to define and prioritize the activities they carry out are:

1. Definition of school transformation objectives.
2. Activity grouping in main themes.
3. Development of a transformational pathway.

Objectives of school transformation

It is possible to recognize that school transformation has endless possibilities within education systems, since we can always move forward towards increasingly sophisticated and demanding ideal of quality. Therefore, within the Mentoring Schools Network, the Objectives of School Transformation are likely to be changed as new horizons allow us to better account for what is happening in the school. Nevertheless, a minimum requirement has been determined, which establishes that any comprehensive framework for transformation must meet at least the following basic conditions:

1. Description of dimensions that take into account the global and inclusive phenomenon of school transformation.
2. Design of objectives that guide and describe the activities carried out by network schools.
3. Contribute with a recognition of the learning pathways created by schools in the network.

The activities of the Mentoring Schools Network in Latin America today respond to what we have called, the Objectives of School Transformation. They seek to promote the development of deep and meaningful learning in students, as well as the use of new teaching methods. Currently, we have selected as a work guide to meet their purposes the dimensions of the "Rubric of School Conditions for deep learning" proposed by the New Pedagogies for Deep Learning and The Global Learning Network. They have been a source of inspiration to design network objectives in its six dimensions: 1) Vision y objectives, (2) Leading a profound change, (3) Building teaching skills, (4) Creating a learning culture, (5) New measurements and evaluation, and (6) Digital acceleration. The objectives for each dimension of the network have been defined as follows:

1. Encourage inclusion of learnings obtained in the network, in the schools' objectives.
2. Provide participation and leadership development opportunities for different members of the schools.
3. Offer capacity building opportunities for school members, according to the needs assessed by each one of the institutions.
4. Encourage reflection on how pedagogical and management practices in schools are geared towards learning.
5. Develop the ability to assess the practices implemented by the school and the impact they have on learning.
6. Improve learning and school work with a clear objective, using supporting technology.

We expect that all network activities proposed by schools will be geared towards achieving at least one of these School Transformation Objectives, so its design ensures that the initiatives presented, respond to the overarching objectives proposed in the network, specifically the one that states the need to promote transformation processes within the schools.

Main themes

On the other hand, with the objective of focusing schools' work on the Objectives for School Transformation from a collaborative perspective and recognizing that it is important that new schools have the opportunity of incorporating in its work, we created three action areas: These areas provide work models to meet the objectives and relationships among a

diverse group of schools, facilitating ownership of the network's cultural elements. Thus, the goal is to transfer the organization's identity through accessible categories that have kept the community history.

The main themes include two lines of actions: one is the Objectives of School Transformation, and the second one, prioritizes collaboration methodologies. For the Objectives of Transformation, we propose three working alternatives: reflection, application and investigation. The support alternatives for the institutions include: dialog, framework and collaborative learning; all of them are activities based on a constructivist approach of teaching processes but require increasing and higher levels of trust among schools as well as joint work.

This is how we propose areas that allow an increase in trust and engagement for schools that facilitate such work in a progressive way, starting with joint reflection around comprehensive processes, in which the outcome or product is not based on an individual institution's concern, but on the needs of those that are part of the network. To this end, associations are created around the objectives and the type of work among schools to consolidate the three main themes: joint reflection, implementation and alliances, which are explained below:

Theme	Description
Joint Reflection	Reflection, at least between two schools, about one Objective of School Transformation at a minimum.
Implementation	Activity in a school where they apply at least one Objective of School Transformation to the reality of their institution for an experience exchange within the network.
Alliance	Two or more schools carry out collaborative practical research associated with at least one Objective of School Transformation.

Education pathway

Lastly, taking into account that the foundation of the work done by the Mentoring Schools Network in Latin America, are the principles of situated and collaborative learning, pathways have been created which allow us to visualize the progress made by the schools regarding network's objectives. Therefore, it is possible to recognize how these emphasize that learning is a group process and address the identity of individuals, schools and the network as a whole, while inviting these three levels to reflect on how teaching practices are carried out as they move forward in their progressions (Weber, Walkington, & McGalliard, 2015).

More specifically, and in accordance with the strategies proposed in the activities' framework, in order to monitor schools' learning of transformation objectives, a system of progress lines was designed that take into account the progress in achieving the Objectives of School Transformation and attention to the main themes. This, with the purpose of:

1. Visualize personal learning and school changes
2. Acknowledge the time and effort devoted to each activity.

Based on the progression lines, it is possible to recognize which core areas of learning have been prioritized by the schools and/or their members; secondly, to show how this process has deepened, thanks to the work between organizations. Through these lines, progressions are increasingly promoting work and dialogue with others.

3. Practice: Listen and Collaborate from a Perspective of Different Characteristics.

What is collaboration? We know that collaboration is important and that there are many initiatives that seek its development. "How does collaboration work?" or "Where does it come from?" is the question that the network has tried to answer from the beginning. One might think that collaboration requires all participants aligned and in uniform, as a coordinated squad where each role and task is determined. This is not the collaboration that the network has sought. In a single sentence, what has distinguished the network since its beginnings is the act of **listening**. The Mentoring Schools Network in Latin America has been a space to listen to different experiences and to enrich themselves above and beyond providing solutions to problems.

In the previous chapters we described the network's history, specifically the importance that "listening" has had since the beginning. More than advising others playing the role of an expert, Grupo Educativo has been supporting schools so that they listen to each other better. For this reason, it has been very important to have a structure that adapts to the network's themes and domain. As a result of network participants listening and advising each other, there are schools that have systematized their practice in different domains. This systematization has the same focus: to allow that other schools find a solution to their concerns. In other words, this makes it possible for schools to listen to the solutions found for the common challenge of improving learning.

The following practices have a summary of the **motivation** or problem that a school faced at the

beginning and a **summary** of how this was addressed. Each one has a link to download the information sheet that explains the practice in detail. In the sheet, each practice describes each implementation step so that it can be replicated. We have also included the pedagogical rationale behind each development, creating differences between the motivational, metacognitive and social factors as well as individual skills and social factors.

3.1. Colegio Netland School, Chile

THE CLOUD: A limitless learning space.

<http://escuelasmentoras.com/practicas/la-nube.pdf>

Motivation: The growing increase in the access to computers and mobile devices, with an Internet connection and to different educational contents, has generated a global phenomenon in which information and communication technology (ICT) is being used to transform classrooms, moving towards the classroom 2.0 based on the use of the cloud. This tool, which allows the development of diverse curricular contents using ICT, is beginning to play a crucial role in transforming and boosting classrooms.

Summary: The practice is to implement a Physics digital notebook called "Physics in clouds", where the use of tools like OneNote and Mathematic 4 is encouraged for students of 16 and 17 years. The objective is to significantly strengthen content, skills and to motivate students to use technology in the study of physics.

3.2. Montebello Academy, Ecuador

Teacher feedback teams' system

<http://escuelasmentoras.com/practicasyequipos-de-retroalimentacion-docente.pdf>

Motivation: Changing teacher's cultures is crucial to address education challenges in the 21st century. When we provide opportunities for interactions and collaborative work among teachers, we are working to remove "knowledge islands" within the school, optimizing the human resources and the ability to learn from one another.

Summary: The practice is the implementation of a system for periodical guided individual and group classroom observations as well as reflection opportunities, promoting a change in the participant's teaching practices. We visualize a system of guiding teachers, in which each of them is responsible for the diagnosis of the pedagogical practices of a group of teachers in a particular area, from which a plan of weekly classroom observations is drawn. The members of the group observe each other's classes, accompanied by the guide, who leads each visit with specific observation objectives and according to the needs and strengths detected for each teacher they are working with. Subsequently, meetings are held with the group to analyze what has been observed during the week, providing mutual feedback, and taking away learnings for their teaching practice; the application of these in the classroom is then monitored by the guides.

3.3. Escuela del Deporte de San Juan, Puerto Rico

Teacher lectures and conferences

<http://escuelasmentoras.com/practicas/charlas-y-conferencias.pdf>

Motivation: The aim is to enrich network with collaboration and learning among teachers, with spaces that allow sharing knowledge, strategies, activities and resources among colleagues, in order to evolve into a competent, specialized and qualified work team to face the challenges of a changing education.

Summary: This practice seeks to favor the professional development of the teaching staff through the implementation of pedagogical training processes between peers, which include workshops and/or monthly participatory conferences, led by the peers, on topics that they have developed in their pedagogical practice, and that help to improve the learning/teaching processes in the classroom. The process of applying for, planning and carrying out the conferences or workshops, as well as the process of selecting the audience that participates in the activities, is a very important element of the work, thus contributing to professional development in multiple areas: collaboration, didactics, rhetoric, systematization, as well as becoming part of the process for teacher evaluation carried out by the school's management.

3.4. Escuela Técnica Roberto Rocca, Argentina

Integration and quality education for youth in the region

Motivation: The Roberto Rocca Technical School (ETRR) is a project created within the framework of the corporate social development programs of Grupo Techint, in the area of education. Our goal is to provide quality secondary education for all community members in the region, seeking the integration of students from families with different social and economic backgrounds.

Summary: The ETRR has a system of scholarships ranging from 50% to 100% of monthly fee that also covers the cost of tuition, materials, clothing and food. Our main challenge is to achieve the integration of the students who, year after year, form very heterogeneous groups according to their origin. In this sense, the objective is to create a warm and supportive environment for each student by providing all of them with the same access to technology. The students who enter the first year of secondary school come from different public and private elementary schools in the area, which poses a significant teaching challenge when it comes to leveling the courses based on each student's previous knowledge. To address this issue and before classes starts, the school offers a math support course for new students who have scores below average on their admission exams. In addition, during the school year, 1st year students can choose between workshops in different specialties (robotics, mathematics, among others) and the Student Department offers a tutoring system with the purpose of providing students and their families with comprehensive academic and emotional support during their time in the school.

3.5. Escuela Tomás Alva Edison, Argentina

Programming at schools

<http://escuelasmentoras.com/practicas/programacion-en-la-escuela.pdf>

Motivation: We believe that traditional literacy is incomplete if there is no digital literacy. Technological tools such as programming allow students to express and implement their ideas, display their creativity and become promoters of change.

Summary: The practice is the creation of pedagogical opportunities where secondary level students make responsible, logical and innovative use of different tools and programming languages to solve everyday life situations creating new solutions. The objective is to make students, not only technology consumers, but participants in processes of developing and creating it through programming, thus also favoring the development of thinking skills such as the capacity for abstraction and planning, breaking down problems and team work, among others.

Conclusions

This document begins with the statement that the Mentoring Schools Network is the result of a way of understanding education. An education without walls or barriers, where, instead of one teacher per classroom, there are many teachers and schools thinking about the same problems, excited to change education. For example, in schools, each principal or teacher is no longer looking for the solution within his/her school, probably, duplicating the efforts made in the classroom next door. Instead of that, a network has been created to channel the energy of everyone involved and to collaborate in the search for educational innovations. This experience has gone beyond the barriers in the Latin American and Caribbean region. Teachers, students and principals of public and private schools with many resources or few resources, participate in the network. This is no coincidence, because until now, the network's priority has been to respond to the needs of its members. This listening process has been supported by Grupo Educativo. However, for the network to continue to grow and strengthen, it is necessary to take a step towards its autonomy.

An organization such as the Mentoring Schools Network in Latin America needs to continuously adapt to participating needs of its members. In other words, as long as the network responds to its members expectations, it will continue to be a relevant context for learning and building alternatives that will allow them to advance in their educational work. The only way this can be ensured is by creating a corporate management for the network. This must come from schools themselves and must be representative and

democratic. This is the next big step that the network must take and that will make a final consolidation as an organization devoted to education, possible. Currently, it is expected that the network will establish an assembly to represent and guide their interests and a council that can carry out the tasks defined by all the schools in the assembly.

Mentoring Schools Network in Latin America Assembly

The network assembly is the new body that allows for legislation, dialog and decision-making regarding the main policies of the network. It is an organization open to all the partner schools. The expectation is that all schools will be able to give their opinion on the activities to be carried out during the year, creating an annual policy or strategy to maintain school participation and transformation. In the future, the assembly will be the highest decision-making body of the Mentoring Schools Network in Latin America. For elections or to vote on different positions, each partner school will have one vote, which can be issued by a previously appointed representative. The assembly shall meet at least once a year.

Latin American Mentoring Schools Network Council

If the assembly expects to be the legislative body of the network, the council anticipates being its executive body. The Mentoring Schools Network of Latin America is composed of advisers elected by the assembly. All active members of the network can apply to become advisers. The role of these advisers is to represent schools' needs in the management

and decision-making processes of the network. The council consists of the necessary roles and coordination to maintain the network. These may be distributed among different members of the council according to their abilities and time availability.

This new democratic structure should become part of it gradually, without interrupting the network's regular activities. The purpose is to improve representation of schools' interests, encouraging participation. This is important as the network grows, because it has been observed that schools reduce their participation over the years. These new structures provide a new participation alternative for teachers that have a trajectory in the network. Finally, the most important thing about this step is that schools can manage the network in a democratic way, addressing their daily challenges to improve the quality of learning.

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Annex: List of Participating Schools

Below are the names of the schools that participate the Latin American Mentoring Schools Network.

Argentina

1. Centro de Educación Integral San Ignacio
2. Colegio Secundario Rural Mediado por TIC N°5212
3. Colegio Tomás Alva Edison
4. Escuela Pública Digital Albert Einstein
5. Escuela Pública Digital Isaac Newton
6. Escuela Técnica ORT
7. Escuela Técnica Roberto Rocca
8. Instituto Amanecer
9. Natan Gesang – Escuela Internacional

Brasil

10. Ecola Municipal Andre Urani – GENTE
11. ETE Cícero Dias – NAVE Recife

Chile

12. Colegio Cerro Guayaquil
13. Colegio Kalem
14. Complejo Educacional Manuel Plaza Reyes
15. Escuela Agrícola de Molina
16. Liceo Bicentenario de Molina
17. Liceo Bicentenario San José UR
18. Liceo El Arrayán
19. Netland School
20. Saint John's School

Colombia

21. Colegio Cundinamarca
22. Institución Educativa Bosques de Pinares
23. Institución Educativa Departamental Rural Silvia Cotes de Biswell
24. Institución Educativa José Asunción Silva
25. Institución Educativa Josefa Campos
26. Instituto Técnico Industrial San Juan Bosco

Ecuador

27. Montebello Academy
28. Unidad Educativa del Milenio Sumak Yachana Wasi
29. Unidad Educativa Tomás Moro
30. William Shakespeare School

Guatemala

31. Colegio Centroamericano

México

32. American Institute of Monterrey
33. CBTIS 59 – Centro de Bachillerato Tecnológico, Industrial y de Servicios
34. Christel House
35. CONALEP Ecatepec II
36. CONALEP Gustavo Baz
37. CONALEP Ingeniero Bernardo Quintana Arrijoa
38. Educar+e, Escuela para el Éxito
39. Escuela Primaria Rosaura Rivera de López
40. Institución Educativa Manuel Álvarez T.M.
41. Instituto Thomas Jefferson

Perú

42. CEPP Sor Rosa Larrabure

Puerto Rico

43. Colegio Ponceño
44. Escuela del Deporte de San Juan
45. Escuela Especializada en Matemáticas, Ciencia y Tecnología
46. Radians School of Math, Science and Technology
47. The School of San Juan

República Dominicana

48. ALIC New World School
49. Comunidad Lux Mundi
50. Notre Dame School

Uruguay

51. Escuela y Liceo Elbio Fernández
52. Liceo Impulso

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