Transforming Education

09.

Evaluating the First Pilot Experience

35 Facts to Measure Educational Change

JESUÏTES
educació

09. Evaluating the First Pilot Experience

35 Facts to Measure Educational Change

JESUÏTES
educació

We need to learn to sail in an ocean of uncertainties through archipelagos of certainties.
Edgard Morin

I've missed more than 9000 shots in my career. I've lost almost 300 games. 26 times, I've been trusted to take the game winning shot and missed. I've failed over and over and over again in my life. And that is why I succeed.
Michael Jordan

What is now proved was once only imagined.
William Blake

The deliberations made by SIPEI members concluded that our schools would have to fully commit to avoid fear taking over or posing obstacles to a significant and necessary change.
Fragment from the SIPEI final statement

Prologue

Education is still placed in the centre of expectations of and opportunities for people. We know it, and we like it this way and we feel committed to making it possible. This is the reason why our project, the Jesuïtes Educació project, is a humanizing project.

This means that our schools are in a constant process of evaluation. We know that the quality of any educational activity increases as long as it is properly planned, motivated and evaluated.

Therefore, since the transforming project Horizon 2020 began in Jesuïtes Educació, we have committed to evaluate it through an external and accurate evaluation system so as to give it the sense we are aiming for and to ensure the educational success it seeks.

Now, we understand that it is time to carry out a first evaluation and to make it public —according to the commitment we made and wanted— in order to meet our aim of progress. For that reason, we hope that the evaluation will provide us with tools to improve and move forward.

We understand that teaching-learning and the methodologies used therein have to be significant and referential, and we use these expressions —significant

and referential— in a meaningful way. They are the backbone and the issue at hand at this stage. As a matter of fact, something becomes significant only in relation to someone or for someone. Teaching becomes significant and relevant for the students when it is related to their current or future life or to their knowledge, desires, or expectations.

Something significant or relevant is, thus, the exact linking point between the strategies of the teacher and those of the students. This is how the teachers and the school exhibit appropriate or successful strategies when they manage to transfer knowledge and values to the students as something significant to the students.

We believe that by betting on this evaluation and by wanting to make you part of it, we are committing ourselves —even more than before— to the progress and improvement of our schools and our project. And it is a daring project; humane, educational, shared, significant and relevant, one that brings us together and enables creative and teaching-oriented implication to be able to guide our youth, children, and students.

We have created many expectations and we have worked hard; now we count on the necessary trust to continue building our project and we think that our results work as a guarantee and allow us to continue improving. Therefore, we invite you to share in this commitment to evaluation undertaken in this book, the ninth in the series.

As I mentioned before, our will is to move forward, to undergo continuous evaluation in order to make our humanizing project possible, and we are sure that we can count support from the people who can make it possible, the reasons to improve it, and the reasons to hope.

Enric Masllorens
General Director of Jesuïtes Educació

Index

Introduction

Over the last few years we have worked hard, we have given the best of ourselves to make a shared dream come true: changing education and moving towards the school we want for our students and teachers. With Horizon 2020, the whole educational community of Jesuïtes Educació has dared to stop, dream big, and act.

We have always said that what makes our project worth it is the movement from words to actions, putting into practice the much-needed transformation of the school. June 2016 is an important milestone along our path: we completed the pilot experience of NEI (*Nova Etapa Intermèdia*, the New Intermediate Stage). Our first pilot experience completed; this is no small feat.

And we are satisfied. The changes are settling into the system, but the Horizon doesn't end. While writing these lines, MOPI (*Model Pedagògic a l'Etapa d'Infantil*, the Pedagogical Model for the Preschool Level) has already begun its third year with those students in P5 (pre-school, 5-year-olds). Further, TQE has begun in Jesuïtes Lleida and Jesuïtes Sant Gervasi; that is, the pilot experience of those students in 3rd and 4th in Secondary school, a program which follows the NEI.

We are satisfied with the job we have done, with the challenges we have faced and the goals we have achieved, with the way we have walked together and way this has transformed us: Today we are more compassionate with others, more conscious of and committed to our dream, and we are more competent and creative in our dedication and will to serve.

It is time to evaluate. We have to add data, analyses, and conclusions from the evaluations on process and impact that we carried out for NEI along with the personal impressions we compiled in book 08 of this series. This is because feelings, intuitions, and opinions alone are not enough. Because on one hand we need to qualify, quantify, visualize, and contrast our progress and, on the other, identify and tackle what needs improvement in order to better measure the experience.

We publicly committed ourselves to this task, and we now want to make the results of the first round of impact evaluation accessible. We are sure that this is the way to format education:

we constantly evaluate and improve the changes we have introduced by studying the impact they produce in our students.

We are not perfect; we are bold and rigorous professionals who innovate and improve their suggestions and offer them to anybody who is willing to change education. We are for a new teaching and learning system which we have already begun and which has to keep improving in accordance with future evaluations.

As for me, my time with the Fundació Jesuïtes Educació comes to an end with the final external evaluation report of NEI and the publication of this book. I would like to use this introduction to mention, once more, that these years have been thrilling (ten years as a member of the Board of Directors first, and then almost eight years as a General Director; that is, almost eighteen years of my life devoted to the Jesuit education project). I would also like to thank JE for giving me this opportunity and for all the work done along the way.

It has been a wonderful period in my life, both personally and professionally, during which I have learnt and grown, shared my conviction for education, and walked next to hundreds of colleagues, directors and educators who have supported this change and who have offered their life projects to serve this educational change.

I have learnt a lot from these people and I would like to thank them —I greatly appreciate everything. I am also very thankful to the institution, the Fundació Jesuïtes Educació of the Society of Jesus, who offered me the task of placing Jesuit schools in the forefront of leading educational change, as it was in their origins.

Thank you and see you very soon!

Xavier Aragay
Director of the Transforming Education series
and Director of the NEI pilot experience

I. The Reason for Evaluation

01

Inertia

02

Innovation

03

Empiric Evidence and Evaluation

05

*Educational Innovation,
Disruptive Change and Evaluation*

06

Horizon 2020 Today

04

Social Sciences and Research
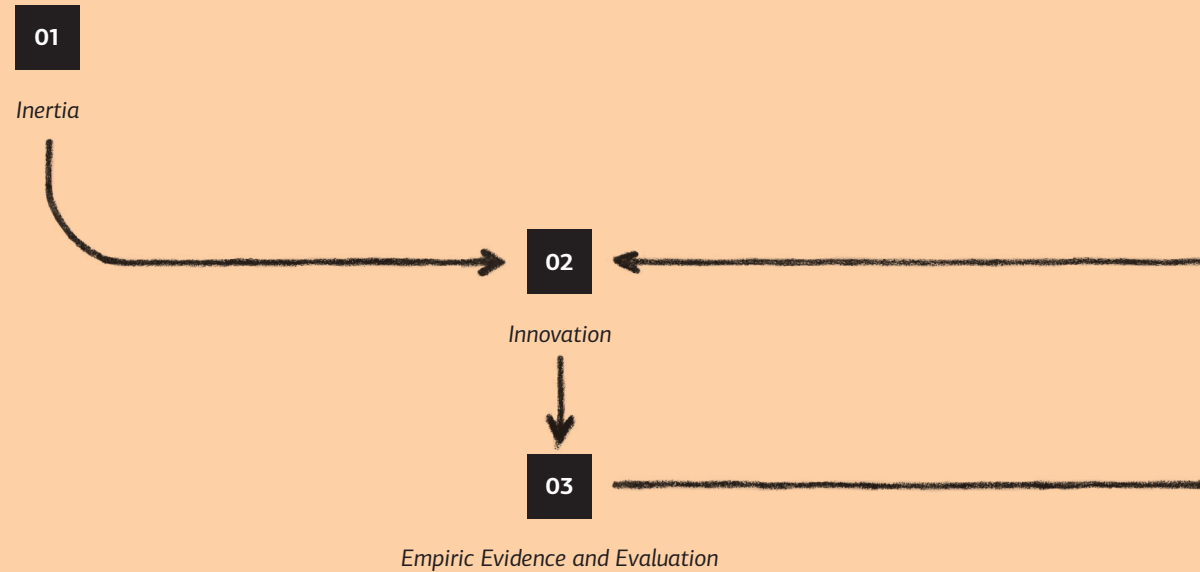
01.
Inertia

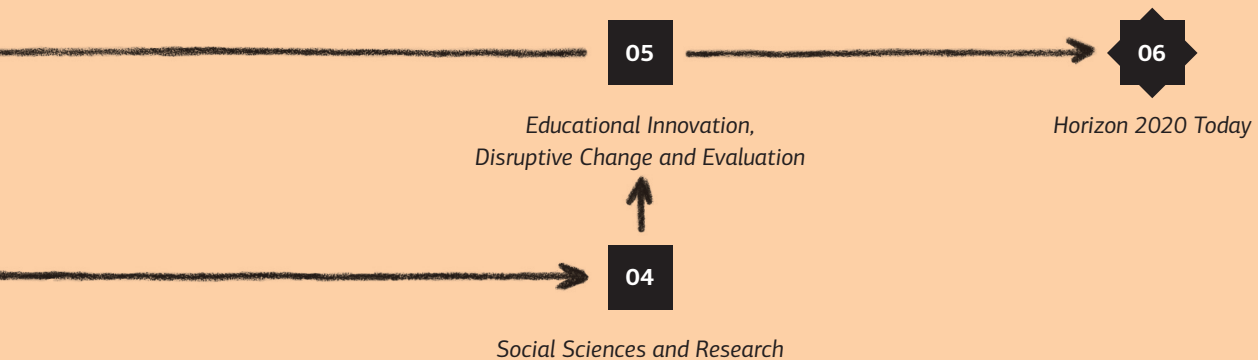The story goes like this: When a woman asked her husband why he cut the legs off the Christmas turkey before roasting it, he said that his mother used to do it.

When they asked his mother why, she said that her mother used to do it. Then they asked his grandmother, who solved the mystery: She did it because the turkey legs didn't fit in her oven.

There are plenty of stories like this one. Throughout evolution, our species has developed adaptation strategies to face specific challenges or problems in a specific moment.

Both biology and culture store these responses so the vast majority of our beliefs and practices were developed in the past and we have inherited them.

So far, so good —but what happens when we manage to completely overcome a problem or it simply isn't a problem anymore?

Even though our "software", so to say, keeps updating (at different paces for biological and cultural changes), it never gets rid of those "cookies" or patterns of behaviour which were useful at one a point but which are not useful anymore.

Referring back to our story: how many turkey legs do we cut off during a day without even realising it?

The past has its own routines. So how should we understand our present if, as we have mentioned on a number of occasions, we don't live a period of change but a change of period in education?

In times like this, many answers that were considered adaptation are not answers anymore since they do not help us solve any problems; the problems that we now have to solve are new and different.

Inertia —the weight of the volume of knowledge provided by cumulative evolution— does not guarantee organization or smooth function of the human world, and does not allow us to face the future and find satisfying solutions to our challenges.

02.
Innovation

If we were only led by inertia, we would be robots doomed to extinction. Life, however, with its many manifestations, considers and uses various tools to interact in a flexible way with the many environments that surround us.

Our species has a unique resource to survive and move forward.

Critical thinking allows us to question the efficiency of our thoughts, feelings and procedure, in great measure. Therefore, we must add our reflective-creative potential to our intuition: We find out what is not working and we suggest alternative solutions; that is, we innovate.

It is worth noting that if, as we saw earlier, we are not only capable of finding new answers but are also able to pose new questions, innovation can become disruptive to inertia in a positive way, as it is in our case.

What is certain is that suggestions can be appropriate or —as it usually happens— only partially appropriate or not suitable at all.

And this is what we call learning. We could state that learning is breaking from inertia in order to incorporate verified improvements. The process we undergo while learning is turning a suggestion into an improvement.

Having said that, one could wonder what the relationship is between this thought and our main topic, which is evaluation. We are merely pointing out the fact that innovation and evaluation are closely related. This relationship is explained in detail in the following section.

03.
Empiric Evidence and Evaluation

The path from suggestion to improvement can be very long… We have to admit that the timings of natural selection of biology are out of human reach. Culture has managed to speed up this process, but to what extent?

This idea has also its own history. From mythological world views we have come to the view of a rational world where the "secrets" of nature are accessible and can be formulated in mathematical terms. Instead of using eventful supernatural reasons, we refer to regular causes that can be understood by observing their effects.

This procedure begins with the initial practice of mere observation and it evolves until we reach the experiments of modern science. Today we formulate hypotheses and we look for empirical evidence that can tell us whether our hypotheses are true or not.

By looking at medicine, for example, we can identify three moments: The magical, the pre-scientific and the scientific. It is not until the 1960's that the idea of the clinical trial is introduced and it results in

what is known as evidence-based medicine. Therefore, nowadays we expect that medical prescriptions are not only based on well-meaning tradition or intuition but on a rigorous and reliable study that proves their efficiency.

What is, therefore, evaluation? Following our storyline, we could say that evaluation is applying techniques and methods used in social sciences to find out to what extent our expected results and impact have been reached by implementing innovation.

Evaluation is a method to discover —after obtaining measurable and verified evidence— if a real improvement has taken place and if, in our case, it has had the desired impact on the student.

We could conclude that without evaluation there would be no innovation, since innovation would not be questioned.

We would like to add that once we have ensured improvement, we can reproduce it in similar contexts. Then evaluation is presented as the sieve that can

guarantee the efficiency of the innovation that goes through the filter and thus generalize its application.

These considerations are evidence that we have to move forward in the theme of educational transformation, towards evidence-based education as a way of continuous improvement and measurement of the introduced innovations in our new learning and teaching model.

And this cannot be carried out by a single school or even by a network of schools. Evaluation must be conducted and shared from anywhere in the world and we should pay attention to any conclusions reached.

04.
Social Sciences and Research

Physics is probably the discipline where historically and in a clearer way we can see the change in descriptive pre-eminence.

With the scientific revolution, holy ideas that explained reality were surpassed in use by observable phenomena and their simplification to the language of mathematics.

From that moment on, technology developed quickly and in a number of disciplines; the Occident colonized the world.

In this context, the debate around the duplicity or truthfulness of the scientific methods gained popularity. Do human-related matters have their own specificity which calls for a different approach? Or, on the contrary, are we only talking about even greater complexity and should we have to keep looking for the mathematic rules that control human-related matters?

The scale of history favoured the second option and, thus, gradually, Schools of Economic Sciences or Political Sciences opened. Scientific Psychology and Education Sciences also appear.

The question that arises from this point was already posed in book 01: If we consider education a science, why is there so little applied research on it? Why don't we find out if our procedures in the classroom are really working? Why don't we put our innovation to the test through rigorous evaluation?

In the same way health sciences have advanced greatly by moving from basic research and exploring the ground of applied science, education-related sciences must overcome the lack of basic research and open up to the extraordinary potential of applied and translational investigation in education.

To state this briefly, our current challenge regarding education is so far-reaching that we cannot continue cutting the legs off the turkey.

05.
Educational Innovation, Disruptive Change, and Evaluation

After this short general introduction, let us clarify some of these concepts in relation to our specific field of interest.

By saying "educational innovation" today we understand this to mean the organized and collective process of transforming the learning and teaching processes (in a school or network of schools) to achieve a well-rounded education (behaviours, values, competencies, abilities, and curricular contents) that allows each student to fully develop as a person (their life projects) in the century they happen to occupy.

Carrying out this kind of innovation is a very complex undertaking and it requires intervention in all the elements of the educational process, within the organization of the whole school and with all the actors in the educational community.

We have mentioned it in other chapters of these books: Small innovations do not lead to great changes. So today we can talk about an educational innovation that initiates —though disruptive change— a new teaching and learning method that is different from the traditional one.

We must state that often, when innovations are set up they can be less effective that the existing system. An initial phase and evaluation are necessary to get these changes to their optimal level of usefulness, which for us is now at cruising speed. We hope it will be better than the previous model in all of its aspects.

For this reason, next to innovation —and from the very beginning— we need evaluation, since the latter is the true force of innovation improvement in the continuous advance towards our new model. Innovation and evaluation are, in this regard, twin ideas that are born at the same time and work together.

06.
Horizon 2020 Today

At Jesuïtes Educació we want to leave inertia behind us and we have rethought school from bottom to top.

As we have stated on other occasions, in the transformation that we are carrying out we don't refer to "flipped classrooms" but rather "flipped schools".

Let's go back: Books 02, 03, 04, and 08 in this collection have served to narrate our process of change.

In books 05, 06, and 07 we introduced the Jesuïtes Educació Educational Model and the three submodels that lead us onward when transforming the teaching and learning process: our pedagogical model, our management model and the changes in the physical spaces of the school.

And now, with book 09, we share the results of the evaluations carried out in the New Intermediate Stage pilot experience.

Let us go back to our storyline. Leaving inertia means stopping and reflecting on what

we are doing to then elaborate new suggestions. We are not afraid of water, so we jumped straight into the pool of change with reflection, thought, strength, and will to learn.
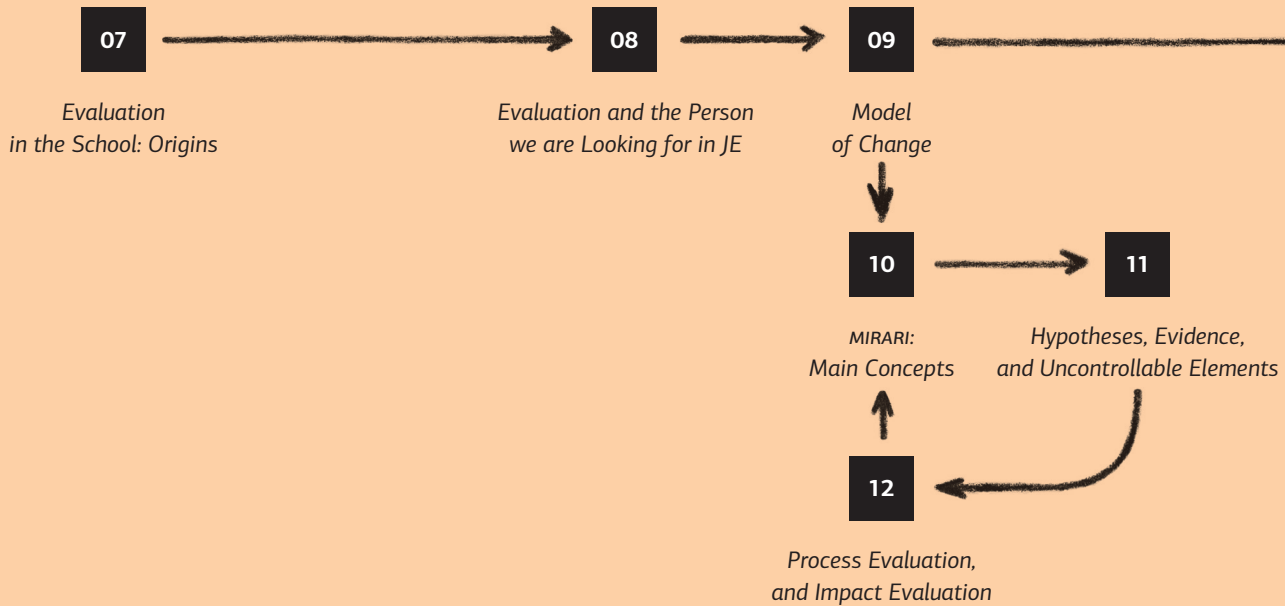
We have to contrast our intuitions and practices. We want, on the one hand, to fix and maintain the best of our educational style and, on the other hand, to incorporate and spread the changes that happen to be efficient in seeking our goal.
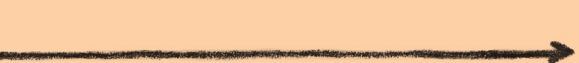
For example, take the growing debate nowadays about whether it is a good idea or not to give students homework. This must be looked at from a scientific point of view. Does this practice contribute to the learning and development of the students' life projects? Do we have concluding studies on this matter?

At Jesuïtes Educació we have always been aware that our participative, systemic, and disruptive innovation needs regular and rigorous evaluation to be measured and to carry on while overcoming mistakes, difficulties, and resistance.

This is the path towards learning. If our goal is that our students learn by trying and failing, it seems fair that Horizon 2020 also does so. Let us highlight this again: Is there anything more meaningful that to turn the school itself into an organization that learns?

II. Methodology

07

*Evaluation
in the School: Origins*

08

*Evaluation and the Person
we are Looking for in JE*

09

*Model
of Change*

10

MIRARI:
Main Concepts

11

*Hypotheses, Evidence,
and Uncontrollable Elements*

12

*Process Evaluation,
and Impact Evaluation*

13

New Intermediate Stage (NEI)

14

Illustration of the Educational Mission

15

Categories to Measure Impact

16

Approach to the Activities

17

An Example

18

Synthesis of NEI Process Evaluation

07.
Evaluation in the School: Origins

It is a fact: In school, evaluation —of the students, of course— is mentioned very often. The students' reports are very easily turned into grades, numbers, exam results, and taken from official tests. Later come the tests for accessing university and university itself.

But are we aware of the origins of this evaluation system? Once more, inertia can make us see something as correct when it hasn't been revised or validated. We gather here its history as told by the researcher Caterina Calsamiglia:

"Historically, the best universities in the world selected their students from their friends and acquaintances since there were no systems to measure talent in society. Interviewing the entire population was not feasible and pre-selection was impossible due to the lack of individual information that was easy to identify and work with. Therefore, the need to create evaluation systems which could be carried out on a wide scale to help identify talent appeared.

"The experts who created these massive indicators warned that these 'tests' were limited;

they pointed out that there were many formal aspects of to everyone's persona and there were abilities that were not measured.

"Throughout the years, these indicators —with some modifications— have defined our curricular contents and they have become the only objective for schools, families, teachers, and children. The lack of appropriate scales to measure some features that we all wish our children, students and employees to have and the need to add more information in an effective way (so as to make these selection processes feasible) have led us to leave aside anything that cannot be recorded with any of these indicators."

We wonder, firstly: What should be evaluated in schools?

We then ask ourselves, even more intentionally: Have we ever focused on the teaching and learning process and evaluated and analysed it?

In book 06 we looked at how we incorporated a new culture of evaluation into our teaching teams with a policy of personal and professional development, and we also talked about how to evaluate the professional activity of the teachers.

We have to broaden our perspective and we must question the school itself, the practices we inherited, and the innovation we are implementing under the umbrella of the Horizon 2020 for ourselves.

It is compulsory for us to evaluate innovations and pilot experiences, and we have started to measure our model and move forward in a systemic way in order to improve. Even if there are no antecedents in this field —or especially because there are none— we should still evaluate educational innovation.

08.
Evaluation and the Person we are Looking for in JE

Evaluation is not an element that we eventually add at the end of an innovation process. The evaluation has to be defined from the very beginning of the process (it is then that we should think about what we want to evaluate). As we have said, innovation and evaluation go hand in hand.

However, if we don't set a standard for evaluation, we will not only lack indicators to know whether we are moving in the right direction, but we wouldn't know —and this would be even more worrying— where we were going. Therefore, it is important that evaluation guides us from the very beginning.

Let us give an example it. The question, "Why do we work with projects?" can generate many answers: It is because the lessons become more dynamic, because the students' interest increases and they learn more, or because that's what they do in Finland and it is what everyone does now in education.

To be able to give a satisfactory answer to a question like this one and not to mistake the ends with the means it is essential to know what we want to achieve with our educational action. What is our goal when introducing this change and what is, therefore, our model in education and as people? We cannot rely on change simply for the mere fact of changing.

We have carefully outlined the type of person we are looking for; we wish to contribute to shaping conscious, competent, committed, compassionate, and creative people (for more information on this, please refer to books 03 and 05 where we discuss this within the Educational Model of Jesuïtes Educació and the 5 Cs).

This is our mission in education. If a boy or a girl grows up in our school over a period of fifteen years, it seems obvious that we will cause a direct impact on this person along with their family and society. And in JE this is the main reason why we are transforming our network of eight schools; we wish to promote the development of the 5 Cs in our students.

Going back to the example at the beginning of this section, working on projects will also have to be evaluated according to this mission. The key is, then, knowing if this new methodology contributes to creating more conscious, competent, committed, compassionate, and creative individuals.

09.
Model of Change

Following our storyline, a new question arises along our way: How do we get from the starting point (our model of person) to the finishing line (the impact made on our students and gathered in evaluations)?

To give an answer to this inquiry, at Jesuïtes Educació we have developed a new model of change that explains how we think our intervention works.

If we decide to carry out a disruptive change (as we have just discussed), the impact that this change seeks to make on the students has to be well defined from an educational point of view.

Having reached this point, we must highlight that our model of change is based on the Theory of Change and the Logic Model, tools that have been developed and that are used in the social sector in the United States and that give substantivity to the task of evaluation and the continuous improvement of programs and projects.

So, after having defined where we want to go (our model of person), we then identify the input,

activities, and the output that should lead us to our desired outcomes.

We should mention here that our work with the different components of this educational chain (which we are going to label soon) should enable us to design and build the school we need so we may accomplish our mission.

Let us now name three fundamental elements in this model of change:

1. It is based on a deep redesign of the activities we carry out in the school (an activity-centred model).
2. It seeks an efficient impact of our educational mission on the student (not only on the result).
3. It focuses on the student and on the efficient impact of our work on each of them, instead of focusing on the curriculum or the action itself.

10.
MIRARI:
Main Concepts

We have a new acronym. It is easy to pronounce (at least in Catalan) and to remember, and this term includes the key elements of the transformation we want to introduce in the learning and teaching process according to our point of view on change and of our pedagogical model.

So MIRARI encompasses the following: our educational mission (MI), resources (R), activities (A), results (R), and impacts (I). Our mission has already been stated in chapter o8 (the model person that we want to teach), so we are now going to analyse each of the other elements in this new educational chain.

Our resources are, firstly, the students: All the children, the boys and girls in our schools. Our resources also include the educators, which is both teachers and the management staff, all their expertise, the physical space itself, the furniture, technology, official curriculum, library, time, etc. These are the resources we have, and we must say that in Horizon 2020 we have aimed to transform the school without adding any new resources. However, we can rearrange the resources we have in a new and convenient way to serve our educational mission.

Activities refer to any dynamic occurrence or action that is carried out with the available resources. One of our resources is embedded in our schools; that is to say, our classrooms. But we can also be creative and re-imagine the educational experience outside these rooms and incorporate the beginning and ending parts of the day, our weekly goals, the field trips, the group work, the individual work, etc. The activities, in accordance to our educational mission and the available resources, must be designed in order to achieve the desired results and impact.

The results are the tangible in that we expect to produce results according to our goals in the design of the activities themselves. We are obviously referring to academic results and also to the milestones reached in terms of the levels of development of competencies, abilities, behaviour, and values. We want to achieve well-rounded results —according to the designed activities— that is to say, results regarding all the aspects of the person.

The impacts, finally, are the changes produced in the students themselves, according to the model of person (educational mission), that derives from the program.

Model of change

MI		R		A		R		I
Mission	→	Resources	→	Activities	→	Results	→	Impact

Initial hypotheses

Existing empiric evidence

Uncontrollable elements

11.
Hypotheses, Evidence and Uncontrollable Elements

After describing the essential elements of MIRARI, we now wish to relate and describe other elements that also constitute it as an idea. We are referring to our initial hypotheses, existing empiric evidence, and any uncontrollable elements.

Initial hypothesis are, as in every action towards a goal, the relational constructs with which we provisionally link some causes to some effects while assuming that experience should confirm or refute them.

These constructs are often not specified in the traditional model and thus they remain unidentified or they are taken for granted and so they are not questioned.

However, the new methodology clearly states what our hypotheses are when redesigning activities and while deciding, according to the educational and pedagogical model, which activities will be carried out, which results and impacts should be achieved.

In order to fully support these initial hypotheses, evidence in other experiences or studies should be considered. If we consider the field of applied research, it seems more meaningful than ever to start from the existing scientific evidence regarding a suggested action. So we must look to any existing studies in our field and incorporate their conclusions; existing evidence will help us move forward.

The third concept in this section refers to uncontrollable elements as affected in a direct way in the learning and teaching process. We must take into account the fact that we cannot control all factors in an experience and that some of them can have a great influence and even have a negative effect on our initial hypotheses. We are a part of society and many elements in society itself have an impact on the learning and teaching process.

12.
Process Evaluation and Impact Evaluation

Given that we have identified the sequence of things in our theory of change, how do we move forward from this point? What kind of evaluation is to be put in practice in the Horizon 2020 project?

First of all, we have to make sure that the transformation responds to the Jesuïtes Educació educational model (MEJE) and to our pedagogical model or Learning and Teaching Model (MENA). This is what we call process evaluation.

Process evaluation tells us whether the development of the educational activities we have designed and carried out within the innovation experience are aligned with the initial formulation of the pilot experience, and it also tells us if the elements of these activities have the desired shape, intensity and meaning.

Process evaluation involves a systematic analysis based on observation and evidence in order to check both design and practice. Process evaluation uses a wide range of methods (both quantitative and qualitative), and it offers completed information

about what is happening, in relation to what we expected. Moreover, it provides information on the nature, context and implicit aspects of the current transformation or change.

We also wonder if the pilot experience is producing the effects we want on the students according to our educational mission; this is what we call impact evaluation. In this case, we compare the model of the person we are looking for to the impact produced on the students.

Impact evaluation investigates the effects produced by an intervention, so it does not only consider the work of the institutions but especially focuses on what happens as a consequence of the activities and results and to what extent the interventions generate change(s) in someone's lifestyle, in their life project, and in the conditions in which they live.

With impact evaluation, we want to obtain empirical data which tells us if the innovation we introduced is promoting the development of a conscious, competent, committed, compassionate, and creative person.

Both of these types of evaluation provide us with elements to measure and improve the deep transformation of the school which we are carrying out in the Horizon 2020 and, in this case, the NEI pilot experience.

As we will see later in chapter 18, let us mention here that process evaluation was carried out over the course of the year and the impact evaluation was carried out at the end of the two first years of NEI.

13.
New Intermediate Stage

Now, an even a closer look at things. What is the educational experience that we want? As the title of this book shows, the evaluation currently being introduced here relates to the first completed pilot experience at JE.

NEI, or the New Intermediate Stage, includes the grades from 5th of Primary to 2nd of Secondary (in the Spanish educational system, that is a total of four years), a maturity period which is not considered one in and of itself in the current division of the educational system by stages.

NEI started off in September of 2014 in three schools in the network (Jesuïtes Lleida, Jesuïtes Sant Gervasi and Jesuïtes El Clot) and in two grades at the same time (5th of Primary and 1st of Secondary) in each of those. The following year, we continued with 6th of Primary and 2nd of Secondary, so in June of 2016 we had completed the four grades included in this stage.
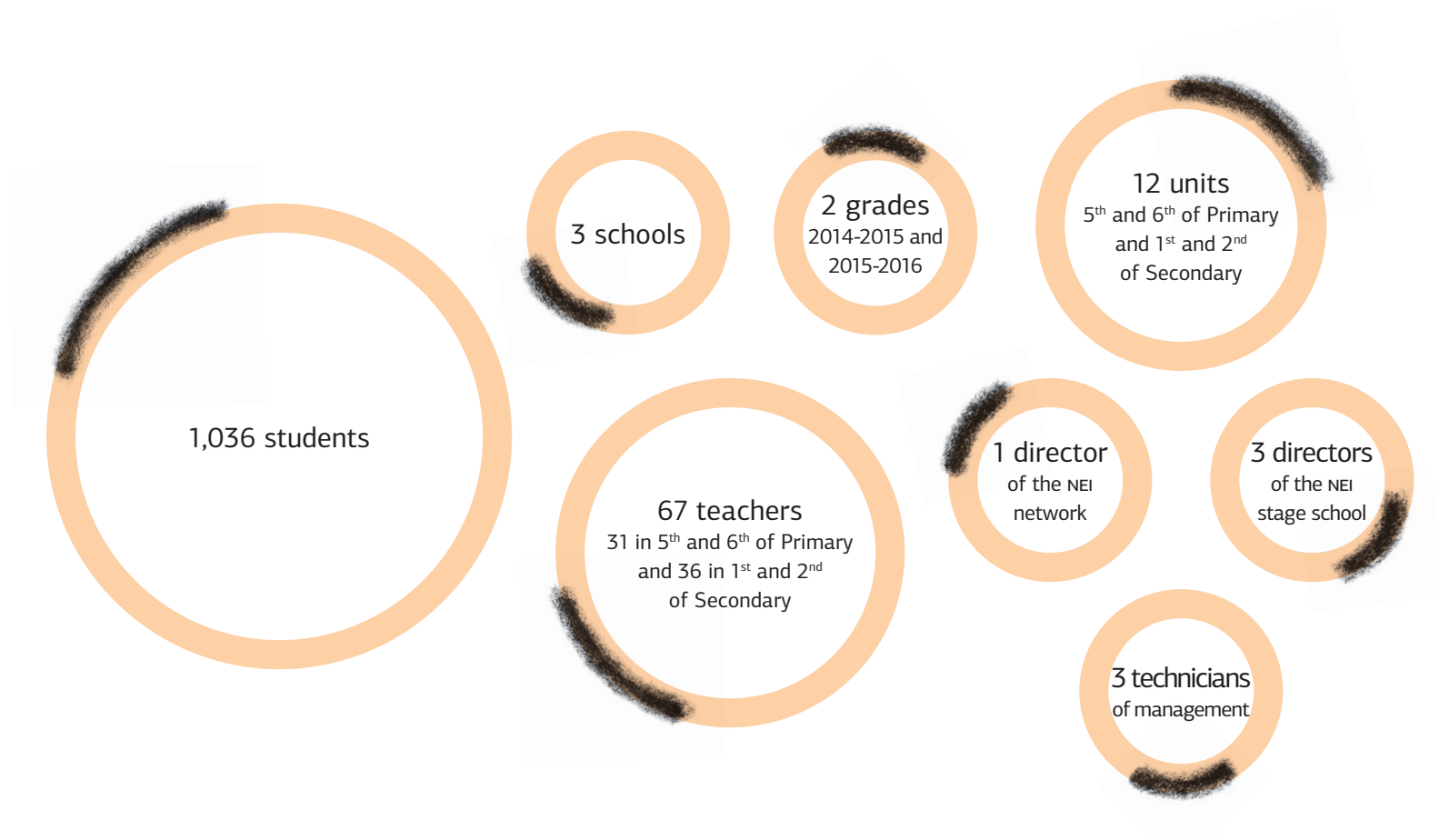
Note that even though we have no students who have done this stage in its entirety (both groups that started have done two academic years), we can say that we have completed NEI stage (the relationship between this and evaluation will be discussed later on).

We should also add that within Horizon 2020, the second pilot experience that will be completed soon is MOPI. It will be done in June of 2017, when the P5 (the 5 year-old students) finishes. This experience started the same year as NEI but only in one grade (P3, the 3-year-old pre-school students), so its completion requires three years.

Please refer to books 04 and 08 in this series for more detailed information on NEI. Both academic years in NEI have been very intense and full of experiences, preparation, action, and reflection. It is life, pedagogy and mission at its best in the school.

To sum up, the data shown here to lay out the extent of the developmental stage we are evaluating is as follows:

1,036 students

3 schools

2 grades
2014-2015 and
2015-2016

12 units
5th and 6th of Primary
and 1st and 2nd
of Secondary

67 teachers
31 in 5th and 6th of Primary
and 36 in 1st and 2nd
of Secondary

1 director
of the NEI
network

3 directors
of the NEI
stage school

3 technicians
of management

14.
Illustration of the Educational Mission

The title of this section could also be "From the General Concepts of Educational Mission to those Relating to the New Intermediate Stage". In other words, we illustrate the general educational mission (the 5 Cs) of the end of the NEI.

We observe that the general educational mission of JE (the model of person) has to be adapted to the age and the psychological and maturative development of NEI students.

This can obviously be done automatically. This task, new and very important to us, allows us to set milestones and objectives in terms of our educational mission that we want to have reached by the end of this stage.

In other words, this refers to our point of view and definition of a conscious, competent, compassionate, committed and creative person, when the students finish NEI at 14 years old.

We are now going to focus on the specific MIRARI of the first pilot experience completed in Horizon 2020.

For each of the 5 Cs, according to our experience and tradition, we have listed a number of items on

which we want to have an impact, and we have given each a corresponding indicator of desired impact.

This intense work towards discovering the direction and sense that we want to see in our educational proposal has posed new questions regarding the design of activities and the results of the learning and teaching process.

On the following page we are going to list the items that go along with each C (the number of related items for every C follows each one in brackets), and we give three examples of each one.

We must also highlight that at the stage of development when our impact evaluation was carried out, MIRARI had a total of seventy-five descriptive items regarding the kind of person we are looking for in our work.

To wrap up this section, we want to add a note about the fifth C, creativity. While designing NEI and its corresponding MIRARI, we added that fifth C (creativity) to the traditional four C's that the Society of Jesus uses (conscious, competent, compassionate, and committed individuals).

According to this approach and considering all the documents given to the research group, in this first stage of impact evaluation creativity was considered a fifth C. As we write these lines in January 2017 the now-preferred option is to keep the traditional list of the four C's of the Society and consider creativity a characteristic of the person that can arise from implementing the rest of the C's.

Illustration of the JE educational mission for the New Intermediate Stage

5 Cs

Some items of impact
of NEI MIRARI

Conscious person (22)

- A student who learns about themselves.
- A student who believes competencies can be learnt.
- A student who believes that setting goals can help them lead their life project.

Competent person (15)

- A student who can solve problems in their life.
- A student who can use different information sources.
- A student who knows how to conceptualize and structure their learning.

Committed person (22)

- A student who works for and with others.
- A student who is aware of strategies to relate positively with others.
- A student whose talent is to serve others.

Compassionate person (10)

- A student who is interested in others and the environment.
- A student with sensitivity towards the world.
- A student who is moved by pain and need in their immediate environment.

Creative person (6)

- A student who can use divergent thinking.
- A student who contributes ideas to help their group move forward.
- A student who is daring and capable of leaving their comfort zone.

15.
Categories to Measure Impact

Since we illustrated the educational mission of NEI by listing the different descriptive items in each of the C's, in this section we are going to look at the three categories that we have defined regarding impact measurement.

They are mental framework (MF in the following chart), behaviour (BEH), and learning (LEAR). We will now analyse them now and complete this chapter with a representative chart of a creative person.

Mental framework is, to put it one way, the configuration of our operating system. It is the codification or system of beliefs that conditions the experiences we have about ourselves, about others, and about the world. These beliefs are usually not defined in the traditional method of evaluation. Out of the seventy-five items in our model of person, twenty-nine are related to the category of mental framework.

Behaviour is comprised of a number of tangible and observable actions that we carry out as living creatures throughout our existence. Of the seventy-five items in our model of person, thirty are related to this category.

Lastly, learning refers to the functional changes that are introduced in some of the aspects we focus on and that guide, allow us and make us able to lead a more meaningful life. Out of the seventy-five items in our model of person, sixteen are related to this category.

Impacts	MF	BEH	LEAR
A student who is interested in the others and the environment		1	
A student who learns to build knowledge collectively			1
A student who can use divergent thinking		1	
A student who accepts that there are many ways of doing the same thing	1		
A student who contributes ideas to help their group move forward		1	
A student who can find creative solutions to a given need		1	
A student who is daring and capable of leaving their comfort zone		1	
A student who thinks including somebody else's thought in the creative process is valuable	1		

16.
Approach to the Activities

At the beginning of NEI pilot experience we designed the activities to be carried out in the pilot, which originated from our available resources and the seventy-five items listed in the model of person that we are looking for in our work.

Referred to as "NEI essentials", we defined the group of educational activities that form the backbone of everything that takes place every day in NEI classrooms.

There are nine NEI essentials (or basic activities) that are meant to achieve each of the impact items, and they are as follows:

1. **Guiding students**. Guiding every person is a pillar in our schools and so it is of NEI. Students have three tutors for their group; that is, three adults as role models to get inspired and grow. Moreover, the flexible organization of NEI allows us to better help these students when need be.
2. **Cooperative learning**. Teamwork has become a fundamental skill in our society, and cooperative learning offers tools to successfully develop

one's abilities in this field. This kind of learning allows for experimentation in different roles, with everyone contributing to the team with our individual responsibilities to achieve a common goal and promotes growth due to positive interdependence and fomenting social abilities.

3. **Competent and significant learning**. In order to fully incorporate and consolidate learning, creating meaningful working environments based on the specific stage of the students' lives is essential. The methodologies used in NEI make this possible.

4. **Shared teaching**. Work on projects requires a cross-disciplinary and complimentary team that works in an organized way. The coordinated work of different teachers is useful to act simultaneously at different pedagogical levels in order to offer the students everything they need in this learning adventure. At the same time, it is a real example of teamwork and integration of knowledge.

5. **The beginning and the end of the day**. The first moments of the day are shared while creating a calm atmosphere and an easy dynamic to be aware of one's interior feelings and the day itself. At the end of the day, according to our tradition we encourage students to take part in an exercise of summing up the experiences they lived throughout the day. Listening to a song, praying or reading the news can be the main activities of this moment.

6. **The beginning and end of the week**. A student who knows their learning objectives will have more opportunities to succeed in their development. For this reason, at the beginning of the week we share what we are going to do and how we are going to do it during that week. At the end of the week, the students revise their goals if these objectives have been met and they make suggestions for the following week.

7. **Life project notebook**. This is a personal task where students gather their experiences,

feelings and wishes. Writing down their experiences allows them to re-live them and therefore make them a genuine part of their life. This tool enables working on their interiority and their spirituality as well as contributing to shaping the students' life projects.

8. **CREA project**. Students are grouped with students from other grades according to their interests with the aim of deciding, designing, and producing a collective creation that results in a show for the families. The students are grouped according to different fields, such as social commitments, technology, photography, music, science, art, etc.

9. **The reading project**. In NEI we are interested in consolidating the enjoyment of reading so it remains so throughout the life of each student. The students can choose the books they read out of 200 titles organized by subject and difficulty. Choosing their books, reading them, and sharing their experience are the main foci of these sessions.

We should also add that these are all initial activities that were defined when starting NEI, and they are the ones that have been maintained during this first stage of impact evaluation carried out throughout the two years of experience.

Later on, after the first report of process evaluation and the consequent improvement plan —in order to better define and understand the activities of the disruptive teaching and learning process— some other activities have been added to this list. These new activities should be taken into account in the second evaluation with a cohort of four grades.

17.
An Example

Maybe the best way to understand this new methodology of educational change process and that of teaching organization and evaluation is by giving an example.

In order to do so, we are going to start off with the MIRARI chart for the Reading project.

To be clear, we must add that the organization of this activity has involved the process of putting together a classroom library with 100 titles and a blog for the students to make recommendations and comment on the reading. These 100 volumes have been selected by experts with consideration to their difficulty while also trying to provide a wide variety of topics.
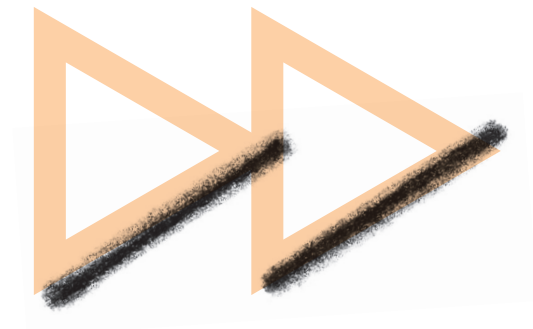
Reading project

MIRARI chart regarding the Reading project

Educational mission	Resources	Activities
5 Cs	Experts – creators	Reading comprehension sessions
	Teachers	Enjoyment of reading sessions
	Students	Reading at home
	Classroom library	Search library collections
	Two hours per week	Visit a library
	Books	Encouraging reading during the summer
	RC texts	
	Classroom	

Initial hypotheses

If students can choose the books themselves, they will read more and they will enjoy the reading more
Since the reading levels are different, we have to organize book into different grades
If they comment on what they read, they will want to read more

Results	Impact items	Types	5 Cs
2 compulsory books and 6 of choice Completion of reading dossier Registered readings	A student who like reading A student who feels it is important to give their opinion on the book they are reading A student who gives their opinion and recommends the book they are reading	MF MF BEH	Conscious Committed Committed

Evidence	Uncontrollable elements
--	Participation and promotion of reading by the families

18.
Synthesis of NEI Process Evaluation

Since we have defined the evaluation methodology, as an ending point for the second part of this book we will list the details of the NEI evaluation process in this section.

During the 2013-2014 academic year, we built and validated the dashboard and the tools for the 2014-2015 academic year by developing the observation study of NEI through an investigation-action methodology (process evaluation).

During the first academic year of the New Intermediate Stage we started gathering data with tools for self-perception as well as non-participative observation tools.

This field research carried out by CETEI (Ituarte Center for Technology) is defined through three elements: first, a questionnaire addressed to the teachers (30 samples); second, focus group work with the teachers (3 samples); and third, forms of direct observation in the classrooms (78 samples).

The process of observing the NEI pilot experience is structured in eight facets, each with their corresponding categories and essential indicators. In a range from 1 to 4 (being 4 the highest value), the overall grade achieved by each dimension is the one shown here in the diagram on the right.

The work carried out by CETEI in the Final Report was completed in October 2015 and contains the data and their analyses. The report also includes suggestions for improvement with a plan of action that is developed in eight points relating to the aforementioned dimensions. After they presented it to the managing board of the NEI, they have used it as a tool for improvement and revision of NEI's implementation.

Please note that this summary/information graphic is available as a PDF on the Horizon 2020 website (please go to Materials>Documents on http://h2020.fje.edu/).

On pages fifty and fifty-one here, a summary of information is presented that is related to the first of the eight observed dimensions: The student.
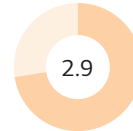
Student
3,2

Teaching team
3,5

Contents
3,2

Methodology
3,2

Evaluation
2,7

Families
2,3

Spaces
3,1

Organization
3,6

Student

Role of Learner

Relationships
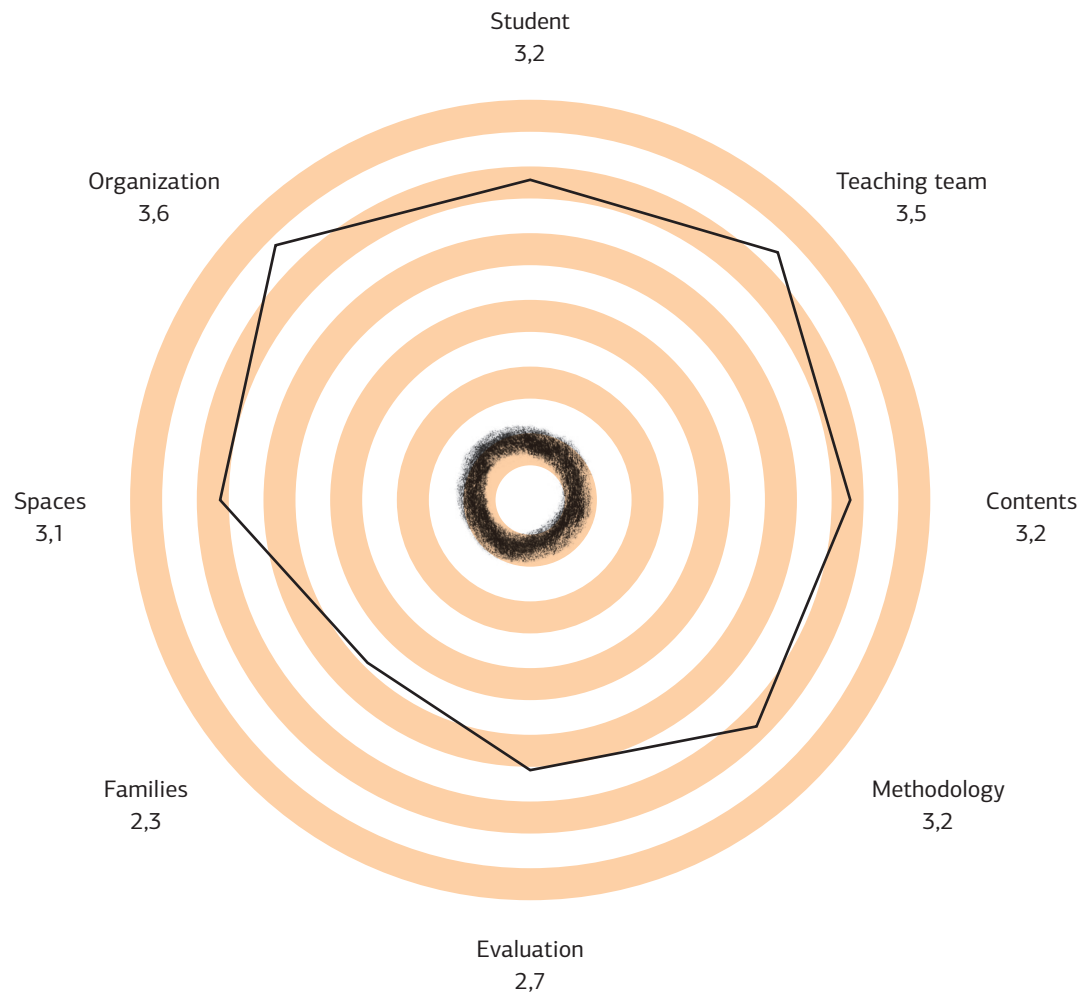
Centre of the learning and teaching process
The student has an active role; the student works
individually and as a team with their classmates,
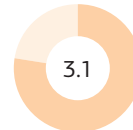guided by the teacher

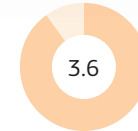**4.0**

The student works using
different learning modalities

3.6

The student maintains efficient
relationships with their classmates

2.9

The student develops different
roles and responsibilities

3.0
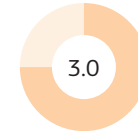
The student shares the working
environment with the classmates

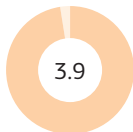**3.1**

The student has
a main role

2.4
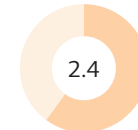
The student shares their working
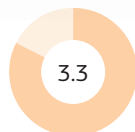environment with the family

Relationships

2.7
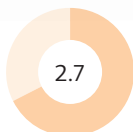
The student shares their working
environment with the teachers

3.9

The student chooses to speak
to any member of the teaching team

Spirituality

3.3

The student makes decisions
about their own life project

Strengths

Application of different grouping systems
according to the activity
Students' participation in the processes
High level of responsibility
Favourable interpersonal relationships among the students
Activities at the beginning and end of the day

Suggestions for improvement

Making their learning more autonomous
Promoting and evaluating the student's
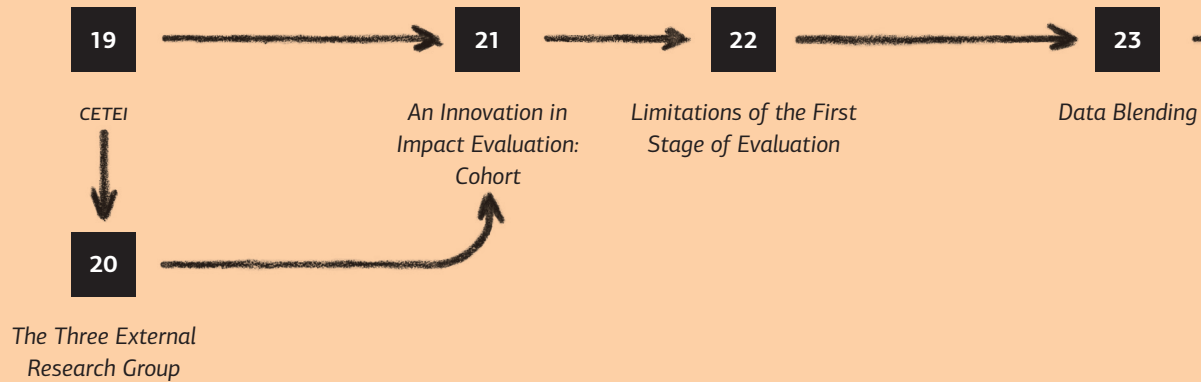learning to learn competence
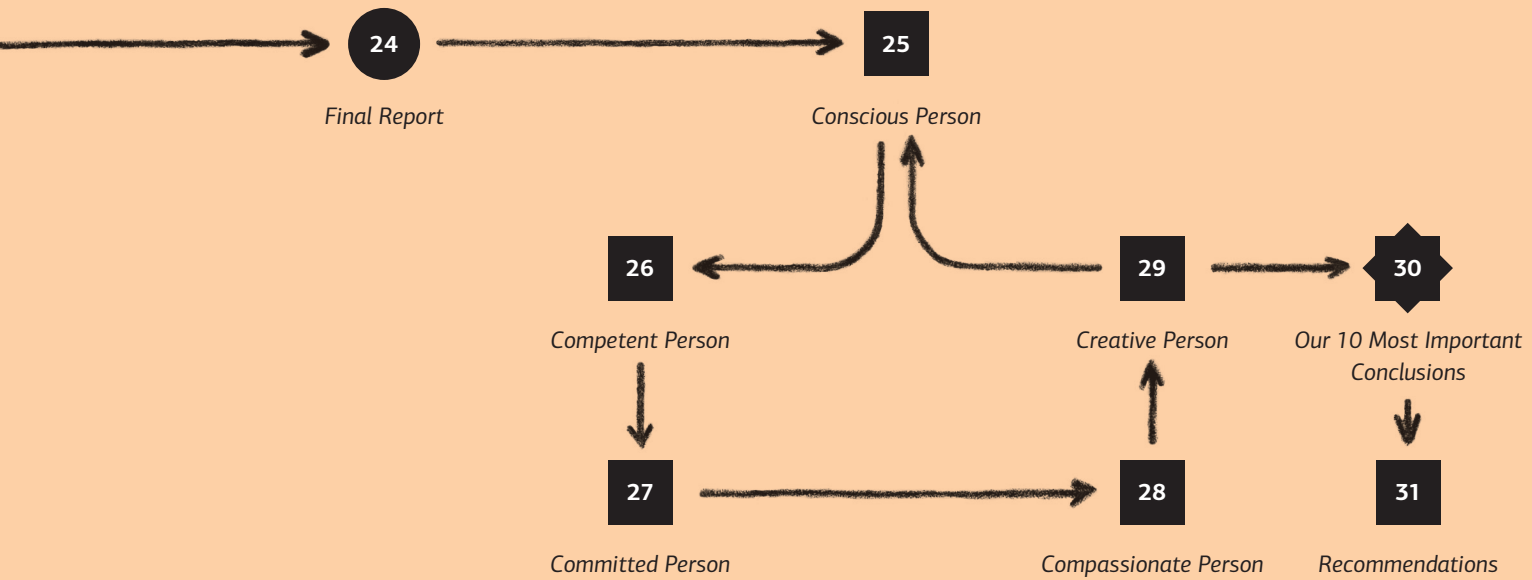Consolidating roles in classroom
Promoting the non-specific roles that help
co-operation and achieve the desired results
Applying the base and reference groups
Agreeing on activities of spiritual development

III. Impact Evaluation of NEI

19 → 21 → 22 → 23 →

CETEI

↓

20

The Three External Research Group

An Innovation in Impact Evaluation: Cohort

Limitations of the First Stage of Evaluation

Data Blending

24

Final Report

25

Conscious Person

26

Competent Person

29

Creative Person

30

Our 10 Most Important Conclusions

27

Committed Person

28

Compassionate Person

31

Recommendations

19.

CETEI

Given that we have defined the *what* and *how* of evaluation, we are now moving on to the *who*. In this matter, we are first going to describe the key role of CETEI, the innovation node of the JE network.

We would like to mention here that CETEI was founded in 2005 as part of the Fundació Joan XXIII with the aim of promoting the implementation and efficient use of IT in education, social, and business sectors.

Through numerous programmes of both private and public initiative (such as the LABTTA project or the organization of ITWORDEDU), CETEI has gained a reputation for quality and commitment to innovation.

Throughout the years CETEI has evolved and has focused on innovation and educational research, acting as a node for reflection, promotion, transfer, and spread of educational, methodological, and techno-pedagogical innovation.

During the last few years, CETEI's main activities have been to support and spread innovation related to the Horizon 2020 project, to participate in the design,

development, and evaluation of the pilot experiences, to help with training and teaching teams, to aid in the creation and editing of educational materials, and to set up workshops and seminars to make this knowledge accessible to the general public.

CETEI is also in charge of a number of innovative ideas that are being implemented in schools in order to promote the culture of thought (design thinking and learning based on thinking), the maker culture (makerspace and robotics), and leisure culture (gamification).

CETEI also offers their educational and knowledge transfer services to other institutions through training programs, and by guiding managers and teachers through anything related to student-centred techniques.

With regards to evaluation and under the supervision of Xavier Aragay (director of the evaluation of NEI), the CETEI team has carried out the following tasks:

A. Collaborating on the creation and definition of NEI's MIRARI with the directors of this educational stage.
B. Carrying out process evaluation throughout the 2014-2015 academic year and writing the Final Report in autumn of 2015 to promote the measurement and improvement of the pilot experience process.
C. Coordinating impact evaluation of NEI and ensuring the participation and involvement of three external research groups, all while conducting different measurement actions firsthand.
D. Receiving the reports of each external research group and writing reports on the relevant measurement actions.
E. Integrating and relating the results from of the four research teams (three external and then CETEI itself) and writing the final impact evaluation report with conclusions and recommendations.

20.
The Three External Research Groups

With regards to evaluation, we have always been positive that one cannot be the judge and a participant at the same time.

Therefore, our impact evaluation has been led by CETEI and carried out by three research groups outside Jesuïtes Educació working together.

A complete version of the MIRARI for NEI was handed to the research groups that were participating in this first stage. Then, each of them could choose their focus of interest within the different sections and items according to their expertise and experience.

Once they had chosen a focus, they decided which methodological tools they would use (based on the item they had chosen), and set the structure for the research groups' actions.

Below we are going to briefly list the origin (A), the interest focus (B), and the methodological tools (C) of the three external research groups and CETEI in relation to the impact evaluation:

1

A. Team led by Sandra Ziegler at the Latin American University of Social Sciences in Argentina in the field of education.
B. Research on the essential activity pertaining to the "Beginning and end of the week".
C. Questionnaire with open-ended questions and a focus group with a structured script.

2

A. Research team led by Josep Gallifa from the Blanquerna-Universitat Ramon Llull School of Psychology and Sport and Education Sciences.
B. Research on creative thinking, habits related to learning and interpersonal relationships and students' mind maps or representations.
C. A Torrance Test, a focus group with a structured script, and an individual questionnaire using the Liker scale.

3

A. Research group led by Caterina Calsamiglia (CEMFI and Barcelona GSE) and Moran Cerf (Kellog School of Management).
B. Research on personal features, cognitive and non-cognitive abilities, and social and emotional competencies.
C. Evaluation questionnaires, exercises and computer-based behaviour tests, and in a second stage, computer-based exercises and behaviour tests with an electroencephalogram (EEG).

JE

A. Team lead by Miquel Amor and Marc Navarro.
B. Research on learning self-regulation, the classroom environment, reading projects and the impact of NEI on teachers.
C. MSLQ questionnaire, Classroom Environment Scale (CES), records of the borrowed books and evaluation surveys, basic competencies tests for 6th of Primary students, a record of passes, fails and repeating students, a satisfaction questionnaire for the families, and focus groups with structured scripts.
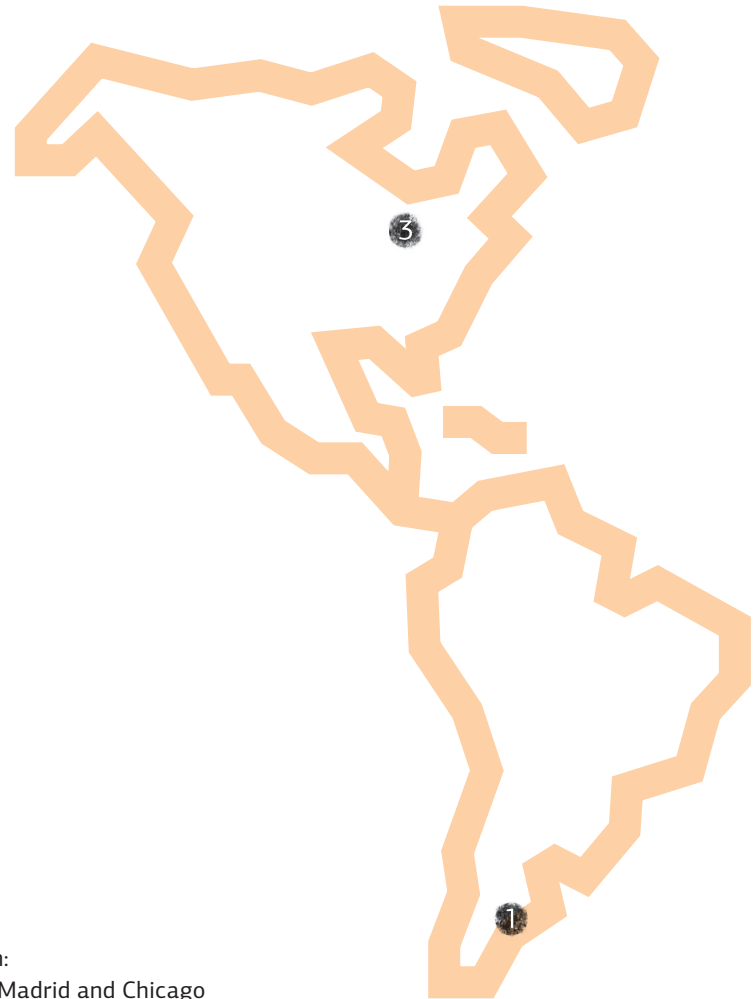
The three external research groups are based in:
1 Buenos Aires   **2** Barcelona   **3** Barcelona, Madrid and Chicago
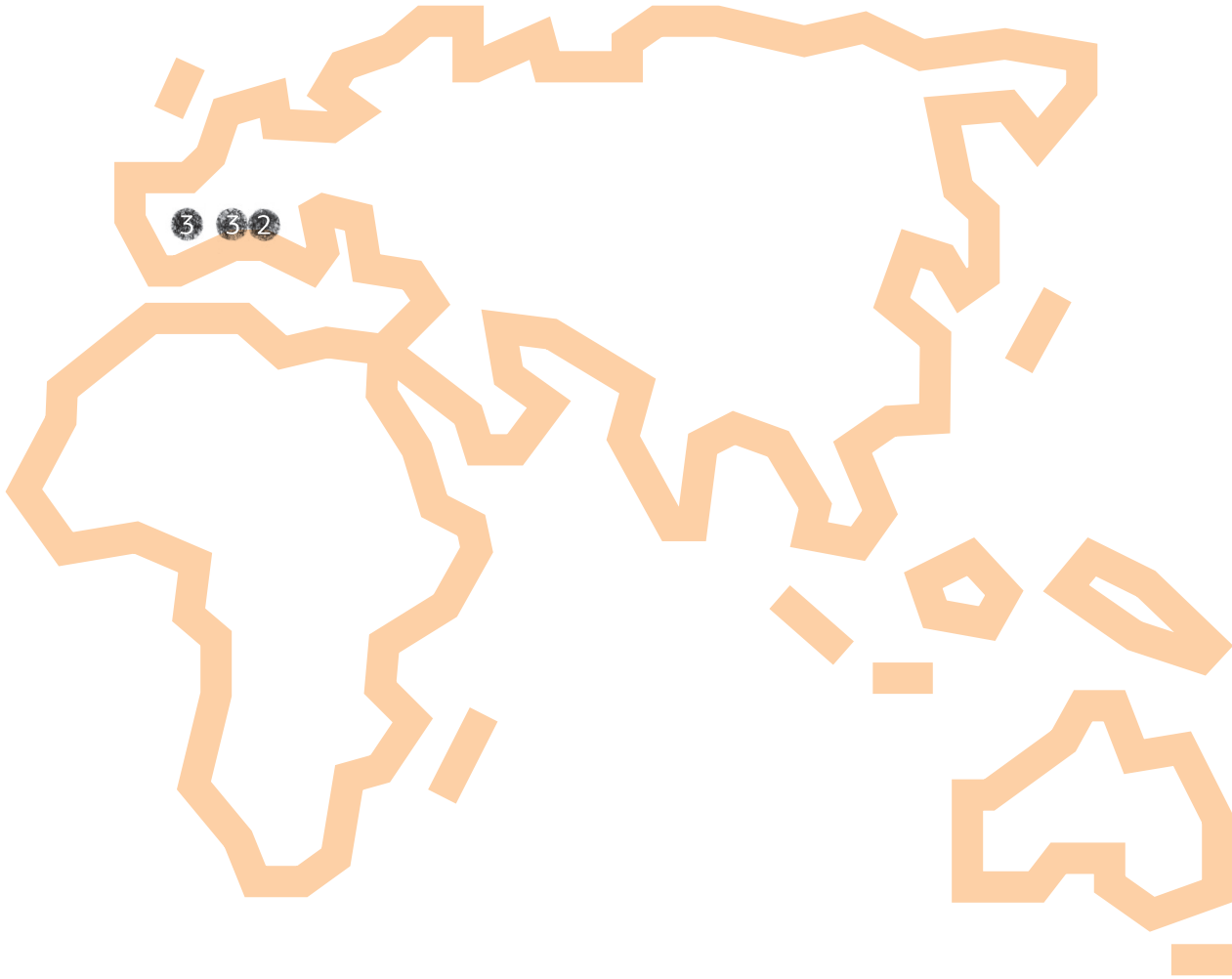
21.
An Innovation in Impact Evaluation: Cohorts

Willing to get the necessary information to evaluate the efficiency of NEI, we have taken advantage of the fact that this experience has been introduced in three out of the eight schools in the JE network to carry out an impact evaluation based on an almost-experimental method.

In this evaluation observation period there was both an intervention group (NEI participants) and a comparison group (the traditional model).

In contrast with experimental methods, which are based on randomly allocating participants in the intervention, in this methodology the selection of the sample is based on the similarities between both analysis groups.

Ideally, in order to validate our method, additional observations are required prior to the NEI intervention both for participants and non-participants (this is a quasi-experimental difference-in-difference technique). Despite the fact that in this first round of evaluation we have not been able to obtain these observations, it is one of the improvements we want to add to future evaluations.

In our case, the intervention group is Jesuïtes Sant Gervasi, and the comparison group is Jesuïtes Casp. This selection was made with consideration to the fact that it enables the highest resemblance between the study populations, especially regarding exogenous variables not related to education but that can have an impact on the expected results.

We would like to add that this practice is not commonly used in education and that it enables us to better measure and compare different models of the teaching and learning process, and it represents an important innovation in these kinds of evaluations.

22.
Limitations of the First Stage of Evaluation

We are going to state this very clearly from the beginning: Here at Jesuïtes Educació we are aware of the limitations of the first stage of evaluations of our first pilot experience. From the previous sentence we can gather that nowadays everything is incipient (but equally rigorous and appropriate).

We must also point out that if our goal with the new educational model is to move towards our desired model of person through mental frameworks, learning, and behaviours, some time has to pass by before we can test them.

Another relevant limitation is that the students who have taken part in the evaluation have only done two out of the four years of NEI and have been following the "traditional" method for nine years.

Regarding methodological issues, we can identify a number of shortcomings that we list in each report. Please access the Final Report and the annexes (available as PDFs on the Horizon 2020 website) for further information.

Let us highlight here that what we have been able to do is to get things going. Perfectionism has not stopped us and what we get from the process itself is learning (a lot!).

Today we can state that we have a clearer and better established basis as well as specific methodologies and tools to conduct new stages of evaluation with higher precision to obtain more accurate, objective, and verified evidence.

Therefore, before introducing a new chapter in the research that was carried out and its conclusions, we must point out that this first stage —rather than showing great evidence for the impact achieved— highlights tendencies towards this impact that confirm key elements of a model we must continue observing closely.

23.
Data Blending

Once the investigations by the research groups have been completed, CETEI gathers all the reports (one from each of the external research groups and one by CETEI itself) in order to blend the data and analyse the result from a global point of view.

First of all, we must remember that our evaluation is based on the relationship of each of the research teams and the impact we want to measure, and it is constructed by obtaining evidence for one or more of the 5 Cs.

Now, this investigation design based on MIRARI allows us to undo the path.

Let us explain: According to the evaluation goal, we take the 5 Cs and their corresponding seventy-five items in order to match them to the corresponding conclusions in each of the particular reports. From each action, we have taken the evidence that we need to focus on, and each piece of evidence has been classified according to the kind of person it applies to in the 5 Cs (conscious, competent, committed, compassionate, or creative).

As we stated before, this organizational system enables to trace the chain in the opposite direction: The objective is to move from the observed impact on the educational mission to looking for direct acts that are linked to the results, activities, and resources.

In a number of intense working sessions, the team in charge of NEI's evaluation covered the walls in the CETEI meeting room with ten meters of paper on which the most relevant data, the ensuing data blending, and then the conclusions were gathered.

24.
Final Report

The huge amount of work in the thrilling adventure of this first stage of impact evaluation of the first Horizon 2020 pilot experience is finally summarized in our Final Report.

Everything started with the definition of the New Intermediate Stage and shaping MIRARI, before moving on to carrying out our different evaluation actions and constructing the corresponding reports to get to the data blending we explained in the previous section.

So during the autumn of 2016 and the month of January in 2017, the CETEI team has written the document that summarizes the antecedents and the raison d'être of our task and presents the data they obtained, their conclusions, and their recommendations for the future.

As we mentioned before, the Final Report from the NEI evaluation is available as a PDF on the Horizon 2020 website in three languages: Catalan, Spanish, and English. Please follow this link to access the English version: http://h2020.fje.edu/en/docs/.

We would like to mention that in this ninth book we are trying to make this information available to a wider public using the usual register in this Transforming Education series.

Moreover, we would like to point out that the following chapters (25 to 29) that refer to the 5 Cs are taken directly from the Final Report. For more information on this, please check section 6 in the Final Report: Results of the first Impact evaluation of NEI.

The structure of the report for each of the five C's as follows: First, a definition of the C and its main impact items. Second, the conclusions are presented and complimentary information introduced to the report. This information is contributed by educators and families. Third, the report lists the essential activities related to that C, and the report ends with an interpretation of the results and conclusions.

The last part in the Final Report, the conclusions, is now reproduced here for each C, and we added the reflections made by the families or the educators in relation to that C as examples.

25.
Conscious Person

Interpretation of the Results and Conclusions
After conducting a joint analysis of all the elements that pertain to the conscious person, we can state that the bases for the students' growth have been divided into three well-defined areas: The relationship of growth to oneself, to others, and to the environment. NEI provides the students with the necessary tools and spaces to move forward in this process of self-awareness and to shape a person capable of judging their immediate environment.

It is important to highlight that the fact that NEI students see a direct link between learning and systemic work —both individual and collective— from the resources that are available, placing this connection ahead of the personal talent of teachers and students.

Results show NEI's impact on the improvement of persistence, organizational autonomy, and on the capacity to set life goals in the long run. These features foster some of the abilities we wish to develop so that the students can lead their own lives and build their own life projects. This confirms that we are moving forward toward the main objective of Horizon 2020 in this educational stage, NEI.

Reflections by the Families
From the external perception study with families regarding the development of their children in terms of consciousness, we gather that the first remarkable fact is that 63% of the participants say they agree or strongly agree. Further, they generally highlight the development of emotional intelligence in their children. Parents have said, "He seems much more confident and he can make informed decisions", "She has begun to understand how to organize her workload and priorities", or "I see she is more involved in the reality that surrounds her and she has a stronger opinion regarding values and decisions."

Additionally, there is the fact that three-fourths of the participants have a positive opinion on the contents of the new report published at the end of each term. It encourages dialogue about their children learning, and this is a fact that reinforces growth.

26.
Competent Person

Interpretation of the Results and Conclusions
Since we have conducted a global analysis of all the results we can state that the requirements to move towards the model of a competent person defined in the Mission of Horizon 2020 have been defined. Similarly, the new role of the teachers in the classroom has set forth a scenario for improvement in classroom environments and an improvement in the relationship between teachers and students, which has helped in the transition from teaching centres to learning centres.

This change in the teacher's role is thus the window of opportunity that enables students to modify their role in the classroom and to gain autonomy, protagonism, and power in learning; it also aids in developing relevant abilities and values to become ever more competent.

Therefore, we can conclude that these changes in the participants' role for NEI create impact on the students regarding objective management and metacognition, the transfer of knowledge, and relevant thinking, while maintaining good results in tests on basic competencies.

Reflections by the Teachers
Including the teachers' point of view here reinforces the importance of the NEI projects, since they add meaning to the students' learning. This new methodology, teachers say, enables transferring knowledge to other learning spaces and environments. Likewise, the offer regarding the means through which the competences are conveyed is widen, since multiple intelligences and individual differences are taken into account: "Now it is easier for students to find their own way of moving forward, and to see what they can contribute to the different activities; to discover their abilities."

27.
Committed Person

Interpretation of the Results and Conclusions
The introduction of the educational model promoted by NEI has changed the way we learn. There has been a break with the model by which expositive instruction was almost the only vehicle of transmitting knowledge, and we move to another model here based on projects (which include many resources to guide teamwork). According to the results (described before), it seems that knowledge based on continuous interaction with classmates has built a stronger commitment, an improvement in social abilities, and greater motivation in class in students.

Indeed, the idea that learning is better when it is a collective activity seems to have settled into the NEI students, who are integrating this new methodology by incorporating different roles and responsibilities in their cooperative work teams and with the individual and collective co-responsibility that this implies.

Even though NEI has doubled the number of students per classroom, the results show positive indicators about the environment and the relationships between classmates and with teachers. Positive indicators also appear in changes in the students' mental framework pertaining to the importance of learning and cooperative work.

Reflections by the Teachers
Teachers confirm this positive attitude towards teamwork and collaboration between classmates. Actually, they understand that the NEI model —based on co-teaching— becomes a role model for students, since they see a team that is cooperating all the time, both inside and outside the classroom. One of the interviewed teachers states: "We present them with an activity to work as a team, and one of the best ways to do so is by exemplifying it with our own performance." As said by one of the NEI directors, "We have a true learning community before us."

28.
Compassionate Person

Interpretation of the Results and Conclusions
The results obtained using different tools in regards to the compassionate person and the impacts that contribute to this part of the Mission, are not enough to highlight any particular trend on whether our actions to promote compassion in the students are achieving the desired results.

Having said that, we cannot state that they are causing any negative effect, either. This report showcases the difficulty we have in finding the tools which will allow us to deal with this aspect of the model of person in an objective way. However, the contributions of the families and teachers regarding an increase in empathy and sensitivity towards situations of injustice indicate that students are developing features characteristic of a compassionate individual.

Reflections by the Families
The section on personal growth with regards to compassion is the one showing the highest percentages of agreement. Up to 77.7% of the participants agree on the idea that their children show more sensitivity in situations of injustice now as opposed to before.

Some examples of this growing sensitivity are, "She seems very angry about the situation of the refugees"; "He stands against the social injustices that appear on the news"; "She contributes to the conversations on current affairs when having lunch, issues that have a negative impact on the socially and politically less advantaged (Syria, refugees, victims of terrorist attacks, aid given to developing countries, etc.)"; or "He has chosen topics related to social injustice for two years in a row for projects at school."

29.
Creative Person

Interpretation of the Results and Conclusions
NEI has introduced areas to boost students' creativity and has generated situations where disruptive thinking is required. The methodology we used asks for answers to given questions that must to be discovered by means of creative thinking, and the suggested answer usually includes others' opinions rather than simply isolated work.

The results obtained via the different measurement tools for the NEI students' creative thinking growth confirm that working on projects in general (and CREA, in particular), stimulates the development of divergent thinking, builds collective thinking skills, and fosters searching for creative solutions.

Reflections by the Families
From studying the external perception of families regarding the development of creativity of their children, we should first of all highlight that 65.7% of the participants agree or strongly agree, since the students show an increased ability to look for alternative solutions to problems. However, this is also the feature of the Mission with the highest percentage of families who disagree, and 14.4% do not consider their children to be more creative than before starting NEI.

Some examples from parents to exemplify this development in creativity are highlighted as follows: "He is able to look for different solutions to an everyday problem"; "Art is developed with the projects"; "She has always been creative, but lately she is surprising me because she is able to break the mould"; and "My daughter is part of an adapted learning plan and NEI has allowed her to develop her creativity regarding how to use her capacities without underestimating them."

30.
Our Ten Most Important Conclusions

After looking at the 5 Cs, we are also going to precisely reproduce the ten most important conclusions that can be drawn from the first stage of impact evaluation of NEI (please refer to section 7.1 in the Final Report as well):

1. **Opportunity, strength and the limitations of this evaluation stage**. Opportunity, since this exercise shows JE's commitment to educational innovation. Since we consider evaluation an essential part of the innovative transformations that are being introduced and that are destined to contrast the impact they generate in the whole educational sphere (values, competencies, abilities and curricular contents) of our students; and that has to let them fully develop as individuals. Strength, because evaluation should be the true motivating force of educational improvement since it provides information on the changes that should be reinforced and the ones that do not work and should therefore be modified. And limitations, because in this first stage solid evidence couldn't be found; the results were only an approximation that let us measure the tools and advance in solidifying a culture of evaluation. Therefore, the importance that this impact evaluation has must be highlighted here, since it represents in and of itself an important innovation in the educational scene —both internationally and nationally— and it leads the way to consolidate the current impulse of educational innovation.

2. **Methodological innovation in the approach and materialization of evaluation**. In order to carry out this exercise, we have designed a logical model derived from the study of transformations in the social field and we have adapted it to NEI. This model for change has allowed us to design the pilot experience and at the same time to set the bases for its subsequent evaluation. Through the use of this instrument we have provided ourselves with a global

methodology for designing, planning, observing, and evaluating transformations and innovations that allows us to move forward toward achieving our goal and improvement of our educational proposal. The progressive implementation of innovations in our schools presents us with the opportunity to conduct an almost experimental study, and to have both an intervention group and a comparison group. This provides us with a stronger methodology and more reliable results. Finally, the fact that this evaluation process is organized in two different phases —in the first place, the process evaluation and, secondly, the impact evaluation— reaffirms that it will be used as a tool for permanent improvement, especially in a field with little experience in the use of these instruments.

3. **Direct impact in our model of person according to age**. The process of adapting the educational Mission of JE (by means of the competent, conscious, committed, compassionate

and creative person) has traced a line that joins the actions of educational innovation introduced and the results in the students in terms of impact. This adaptation has been carried out through logical methods and MIRARI, and through the definition of 75 impacts to be noticeable by the end of the stage. This is a very important advance in terms of the design, follow-up, improvement, and evaluation of the innovations introduced in the schools. We must keep on working towards a stronger connection and spreading it to all of the C's, but certainly the path we have begun improves the possibility of redesigning the whole the student-centred process of teaching and learning and the impact we wish to produce on the students after they have completed a certain stage.

4. **The importance of placing the student at the centre of the learning and teaching process**. Data shows that the decentralization of the teacher's role in NEI has empowered students and

has been the driving force that has moved the other elements toward success in the innovation we analyzed. In this regard, the evidence for the growing autonomy of the students, the fact that the students and the teachers (and the students themselves), are closely bound together, the evidence that improvement of the classroom environment benefits education, and confirmation of the positive effects that cooperative work has on students all represent a highly significant advance in NEI's innovation. They also signal the strategic importance of placing the student at the centre of the process. The conclusions reached by our analysis and interpretation of the results of the committed person are a good example of it.

5. **The change must be disruptive and still coherent in terms of its tools**. The new approach to the teacher's role has also proved to be a positive change since it has happened alongside the new models of pedagogy, organization, and of physical spaces. These new models have provided us with more tools and spaces to serve our goal. Elements such as content prioritization, curricular revision, shared teaching, and large groups (among other features) have enabled us to introduce new activities, as well as providing different timings for the transforming educational project introduced. In this sense, the multiplying effect that the different tools and observations have shown us seems proven, according to the conclusions regarding the conscious person.

6. **Academic results are held to high standards**. The report underscores the good academic results in NEI even though the methodology, organization, and roles in the education process have undergone a deep transformation. We would like to highlight that these positive academic results happen alongside fundamental elements for the development of the students' life projects and all necessary abilities, competencies, and values for individuals living in the 21st century. We must also highlight that according to the aim

of Horizon 2020 and the theory of change we considered when designing NEI, there has never been the intention of consciously improving academic scores since these were already high. The aim —which has clearly been achieved— was to maintain those academic levels while moving towards setting new mental frameworks, learning, and behaviours in the students at the end of this stage that, will most likely have effects on the individuals we want to teach in the intermediate future and in the long run.

7. **Positive results in classroom environments and creativity**. The best results that derived from all the tools used in this evaluation are related to classroom environments, students' creativity, and the importance of cooperative work. Even though it could seem otherwise, the classroom environment improved despite the increased number of students. This is an incredibly significant change for education and learning.

Finding a way to improve creativity and the students' mental framework regarding teamwork becomes an important step in consolidating the innovations we have introduced. These results shed light on some of the objectives defined when we designed NEI's disruptive innovation and also confirm many of the hypotheses on which those objectives were built. We will have to keep an eye on the evolution of these indicators in future evaluations, especially those indicators related to the creative person, which have quite significant results.

8. **Teachers and families support the observed tendencies**. In relation to the development of the students' personal growth, we achieved a positive assessment from the data gathered from NEI teachers and parents. Moreover, the life and professional projects of the educators has also undergone changes in very positive ways. This compels them move forward in becoming better role models.

This is in spite of the fact that there are some emotional and personal losses, which are common in any environment where the relationships between people have become closer and more intense.

9. **We are at a stage where we measure innovation**. Impact evaluation of the students in NEI pilot experience has brought us very important information to advance spreading NEI to the rest of schools in the network and the world. With regards to this, we should take into account some warning indicators that have appeared. The most important ones are some emotional exhaustion in the teachers, sustainability of the model in terms of resources, and how to improve the involvement of families. And at last but not least, we need to find more and better tools to better evaluate these seventy-five impacts that we defined and linked to NEI's educational mission, especially those related to the compassionate person.

10. **We have to keep moving forward to obtain further evidence**. Some of the hypotheses we had when starting our disruptive innovation in the NEI pilot experience have been confirmed, either as conclusions or as patterns. These confirmations have been determining steps in the process and are not widely seen in education, which encourages us to continue working to improve the experience and move forward with a higher capacity, more experience, and knowledge towards a second impact evaluation of NEI in June of 2018. By then we will have the first cohort that has completed all four years in NEI. This has always been the basis on which we have carried out evaluation. Even though we do not expect great differences in the impacts we analyse, we must state that this has given us strength to face a second stage and to move towards establishing an evaluation culture based on our current and any future evidence and educational innovations.

31.
Recommendations

Section 7.2 in the Final Report lists a total of thirty recommendations relating both to the development of the New Intermediate Stage and to future occurrences of impact evaluation.

Some recommendations in both areas are listed below:

1. Regarding the development of NEI, we must analyse how time management has been experienced by the teachers, and establish measures for the improvement of its perception. We also recommend both initial and continuous teacher training, which includes tools to help involve families, tools for emotional management, and tools for time management.

   Let us highlight here that impact evaluation is not focused on the pilot experience but rather on the impact it produced on the students. The previous paragraph can only be understood taking this consideration into account. While working to improve NEI, we conducted a first process evaluation in 2015. This resulted in conclusions and recommendations that we have already incorporated to NEI.

2. In terms of evaluation, our recommendations in the report are divided into five parts: reliability of the registries; improvement or suitability of the tools in use; the need to look closely into specific areas; future potential of the analysis; and need to look for new tools and approaches for furthering the impact of the educational mission.

   In general terms, we could state that these contributions suggest increasing the participation of teachers and students in the evaluation process (more information is available in section 32 in this book), carrying out an exhaustive development of MIRARI, moving forward in terms of reliability of the registries of NEI activity, incorporating pre-tests, improving current tools for measuring and incorporating new ones.

IV. We Keep Learning
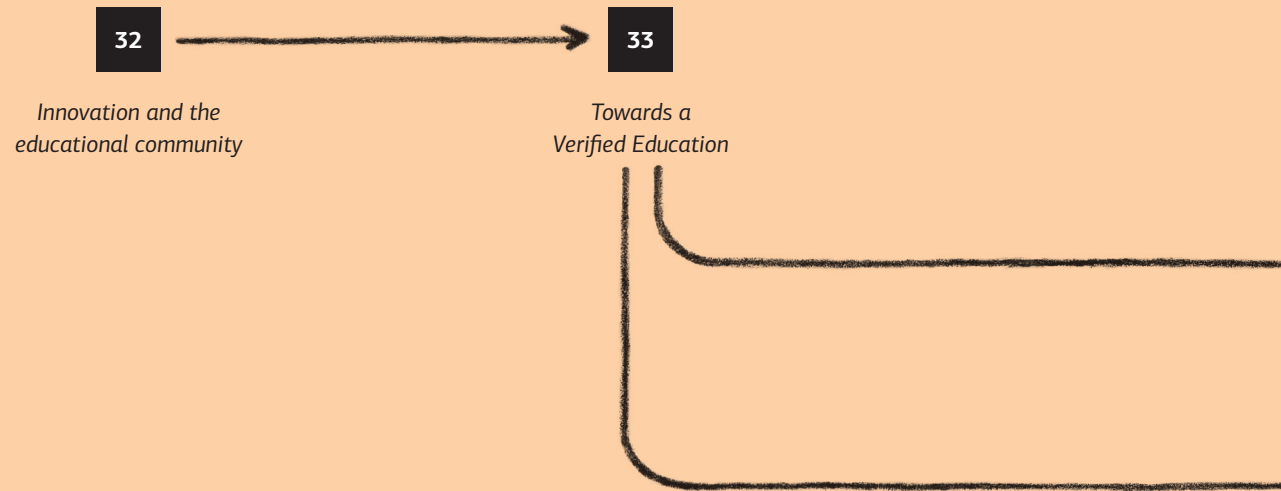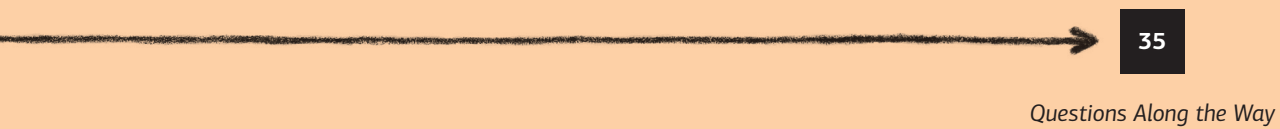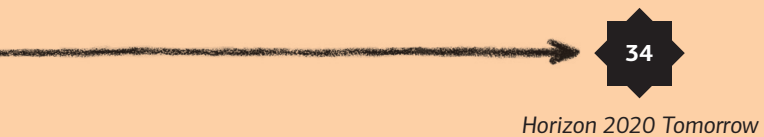
32

*Innovation and the
educational community*

33

*Towards a
Verified Education*

34

Horizon 2020 Tomorrow

35

Questions Along the Way

32.
Innovation and the Educational Community

After presenting the conclusions of the first stage of impact evaluation of the New Intermediate Stage, we now begin the fourth part of book 09 and move to consider some questions regarding educational innovation which we encounter now.

First of all, we must highlight once more the leading role of the educational community in transforming a school. As we have mentioned many time in this series, not only are external experts in charge of change today but also educators, families, and students.

We must note that educational innovation and evaluation are also included in this last statement. Therefore, it is essential that the new culture regarding the following up and improving education is understood and incorporated by those three main agents of the educational community.

This is the only way to make an evaluation process like the one suggested by Jesuïtes Educació meaningful and feasible. It is not —as we mentioned before— about being obsessed with the results, but about having real tools with which to promote learning and improvement of our educational task based on a person and their well-rounded development.

We must go all the way to the idea of impact. Results only ensure success of a specific action or knowledge after having carried out a number of activities. However, impact does bring us to the bottom of mental framework, behaviours, and favourable learning; that is, to what we really want to teach.

Professionals in the field of evaluation provide us with tools, and they structure the debates and data. However, let's not forget that they are not the only ones who have a say in that; we are all called to participate in disruptive innovation.

We have defined Horizon 2020 together; we have walked together through NEI pilot experiences (we as educators, students, and families) both in its design and as it is carried out, building the school we want together. Now we must all commit to its transmission and continuous improvement.

33.
Towards a Verified Education

In the first part of this book, we referred to the need for introducing evaluation in the educational sector alongside the need especially for incorporating disruptive innovation. As in any other field, changes and innovations need to be verified and measured for their transmission and incorporation.

Nevertheless, we should be as rigorous with tradition and inertia in the schools as we are with the new educational practices.

The NEI Reading project, for instance, asks for registry and data collection regarding the number of books read by students in the intervention and control groups; it also looks at the impact of each contribution to stimulate reading among students and to promote a habit of reading.

It could certainly be the case that some methods that we use today —without even questioning them— not only do not encourage the reading habit in students but they even frustrate it; that is, they can be counterproductive and have a boomerang effect.

The evidence-based education that we are promoting attempts to get education out of its ideological stage and place it firmly on grounds of impact and evidence analysis, and it seeks to do so from the point of view of a student and their progress as a person. Considering the moment we currently occupy, this protection seems urgent.

A fact: The *Oxford Dictionary*'s Word of the Year for 2016 was "post-truth", a word defined as 'relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief'.

In education, we must set forth with evidence that guides our way and shows us the clear boundaries between those activities that we carry out and the impact they have on our students. We must look for new methodologies to structure change and constant improvement, which can also be evaluated and verified.

The alternative is faking it and hiding information in favour of the status quo or private interests; this is the opposite of what we want the 21st century school to be. We therefore continue daydreaming, moving forward together and sharing our learning on the way towards a well-rounded education for the person and its constant validation and evaluation.

34.
Horizon 2020 Tomorrow

As we stated in previous books, the Horizon 2020 project goes beyond the year 2020. This is not only because introducing the different pilot experiences and transforming all eight schools in the JE network takes some time, but also because innovation is here to stay.

The participative, systemic, and disruptive innovation that we are encouraging in Jesuïtes Educació asks for a methodology based on constant improvement that helps us avoid getting distracted or stuck in our own innovations.

In Horizon 2020, process and impact evaluations as methodologies for planning and constant improvement have only begun. This first stage of evaluation must be followed by others during the coming years in order to make pilot experiences better as several of them are still in progress: MOPI (2014-2017), TQE (2016-2018), and NEI (2014-2018).

This is still only the first stage; we will need new and periodical evaluations which also include future pilot experiences. If we have to include innovation in our everyday activities, we should do the same with evaluation (they go hand in hand, as we mentioned in the first section of this book).

As we saw in section 32, continuous improvement based on education requires direct participation and the involvement of students, families, and educators.

Let's not forget that the liquid modernity requires flexibility, professionalism, and constantly-adapted solutions. We are no longer in the era of only external specialists and standardized solutions.

Only if we provide our teams with power in simultaneously epic and rigorous culture will we be able to continue building the school we want, a challenge that calls for enthusiasm, humility, leadership, and constant learning about our task. It is a challenge that defines our work —as we mentioned in the prologue— as a humanizing project.

Teamwork is an aspect shared across all the elements of the transformation, from shared teaching in the Horizon 2020 pilot experiences to the global network of schools committed to change. Once more, this will only be possible if we do it together.

35.
Questions Along the Way

After writing this line five time we realized that trying to conclude this ninth book is like jumping on your own shadow; it is impossible, it is a contradiction in and of itself.

Can an evaluation be concluded? Shouldn't it be the other way around? Isn't evaluation a way to open more windows? There is no doubt that we have learnt from the path we walked, but now more specific and precise questions appear as we progress along the path we have yet to tread.

These questions are the ones that show us the way to go on this adventure. During the process of writing the Final Report, we listed as great number of them.

We do reproduce the list again here (you can find it in the report as well) but we think that these are *our* questions. So in a way they are, dear readers, answers to you.

Therefore, we invite you to pose questions; or, in other words, to imagine different scenarios, to question for yourselves what we are and what we need to do in order to go a little bit further together, to go further every day.

This has only just begun.

We are counting on you.

Only one last point: *truly dreaming* is not an obvious action; we must pay attention and we mustn't get lost on our way; it would be a pity to waste so much of the mystery on mere fantasy or in bitter frustration.

We can become better, more conscious, competent, committed, and compassionate because we can re-image and re-create ourselves; we do so in a creative way. So let's have the will and excitement to become better. Let's re-imagine education.

Table of Contents

III. Impact Evaluation of NEI

IV. We Keep Learning

Acknowledgements

For the opportunity to live this historic moment, we would like to thank:

All of our educators, both Jesuits and laypeople, who have served before us in the Society's schools, for having blazed the path of innovation.

All of Jesuïtes Educació's educators, for their enthusiasm and commitment to finding new answers to the challenges of the present every day.

All the students of the eight schools in our network, for their ideas, their spontaneity and energy; together, we're transforming reality.

All of our families, for their trust, support and participation. Only by working as a team can we move forward.

Ignatius of Loyola and the Society of Jesus which he founded, for the spirit and strength that inspire us to turn our educational task into a life serving others.

Works published in this collection:

01.
Focusing on the Objective
40 Considerations for Educational Change

02.
Paving the Way
35 Keys to Bringing About Educational Change

03.
Defining the Horizon
37 Milestones in Dreaming up Educational Change

04.
Taking Action
35 Steps to Living Educational Change

05.
Defining the Pedagogical Model
*37 Pillars to Support the Foundations
of Educational Change*

06.
Rethinking School Management
30 Strategies to Organize Educational Change

07.
Redesigning Educational Spaces
35 Scenarios to Outline Educational Change

08.
Tasting the Dream
32 Experiences to Live Educational Change

09.
Evaluating the First Pilot Experience
35 Facts to Measure Educational Change

This Book

This new book in the Transforming Education series is a final step in concluding the introduction of Horizon 2020. Having completed the pilot experience of the New Intermediate Stage (NEI), in June 2016, we are now sharing the results of its first evaluation.

As we have seen in previous books, the people of Jesuïtes Educació have stopped to reflect on their job, to dream, to get ready and to carry out this deep transformation of the school. If we wish to continue learning, we must look closely at our actions and their results. Rigour and passion are the mainstays of our job and so we continue growing and moving forward.

Our Project

In Jesuïtes Educació schools, we've been working on a project since 2009 meant to renew education on a broad scale, which we call *Horitzó 2020*. We've eagerly been working hands-on, as a team, to create a new way of understanding education in the 21st century.

The Collection

In order to fulfill our objective, we need to take the time to stop and think, to analyze our experiences so that we can act more effectively in the future. That is the aim of this collection, which is the work of different authors under the direction of Xavier Aragay. With the Transforming Education collection, we want to consolidate our successes and share our experiences so that we can continue improving together with all of the individuals who are committed to this essential task.

This is our humble contribution, our way of helping bring about the change that's needed in education. We all need to move forward together, sharing our passion, our inspirations and our experiences.

For more information, visit our website at http://h2020.fje.edu

You'll find videos, newsletters and all of the volumes in this collection available in Catalan, Spanish and English, as well as a space for participation where you can send us your contributions. We hope to hear from you! Thanks in advance!

9 788461 782796