

Innovation for Change in University Education¹

Pere Jaume Alzina Seguí

University teaching of Balearic Islands University
Seu Balearic Islands University in Menorca Island
Balearic Islands
Spain

Pere Jaume Alzina Seguí

Carrer Mallorca, 7
Balearic Island
Spain

Abstract

We herein lay out some of the qualitative results of a process of innovation centring on a group of first year undergraduates of a primary education teacher training degree who are studying at the Seat of the University of the Balearic Islands in Minorca. This innovation aims for students to be the centre of the teaching and learning processes, collaborating in the design of the contents, of the activities and of the assessment criteria. The basic objective is to endow the students with the maximum degree of autonomy and the ability for self-management; the university teachers acts as a guide in the learning processes through reflection on action. The results indicate that the students are becoming aware of the importance of being generators of knowledge and not merely passive recipients. The students have become aware of the need for innovation for change, a professional change that also affects social and personal levels.

Keywords: innovation for change, reflection on action, Human understanding, autonomy, self-management, guide in the learning processes

1.1. Introduction

In the information society we cannot impart closed, unique or absolute knowledge. We work with knowledge drawn up by a specific scientific community in a specific historical period and in a concrete context. We, therefore, work with contents subjected to contrast, to change and to evolution as the different scientific fields advance. Rather than working on certainties we should learn how to dialogue with uncertainty. We need many outlooks in order to develop and construct a committed (not neutral) vision of the world. A vision capable of transforming the reality so as to improve it: a transformation that entails, in the medium term, a personal and social transformation. In order to educate for this transformation we must get to know the ideas, the thoughts and the experiences of the students and reorganise them by means of a core concept, concept map or schema. We will get to know the students' ideas through continual dialogue. The university classes should be founded on dialogue as the basic means for the joint and cooperative construction of knowledge. This continual dialogue is posed in the form of questioning. Through interesting questions we question reality so as to get to know it more in-depth. The questions and dialogue foster reflection on action; reflection turns into the basic tool for building knowledge. The students construct new knowledge stemming from the questions that they themselves formulate and that we, the university teachers, must encourage and prompt new questions. The drawing up of new knowledge is completed with a progressive awareness-raising of the need to transform, of the need to change the transmission model for an interactive model based on cooperative learning.

¹ NOTE: WRITTEN INTERVIEWS ARE FORMATTED IN QUOTES ACCORDING TO APA GUIDELINES; WRITTEN CONSENT WAS GIVEN FROM THE RESEARCH PARTICIPANTS TO USE THEIR ORIGINAL TEXTS

1.2. Reflection on Action

The cornerstone upon which we centre the teaching and learning processes is that of reflection on action. Reflection on action allows for:

- 1.2.1. The conscious development of competences through study and professional practice in real contexts. Within the course we devote several days to attending different schools in order to observe, plan and intervene so as to then share the experiences and reflections. This pooling of knowledge allows one to contrast the theory with the practice and to build knowledge on how we can improve the learning processes.
- 1.2.2. Reflection allows one to observe with an open and constructive mind; it allows us to distance ourselves from stereotypes and preconceptions and it allows us to overcome prejudices that, on most occasions, are generated unconsciously. These prejudices can provoke unfortunate interventions and distorted assessments.
- 1.2.3. Reflection can promote complex thought and transdisciplinarily. We work from within a subject matter but we endeavour to make knowledge acquired in other subjects be taken into consideration. We try to shy away from simplistic views of reality. We analyse the complexity of the relationships between students and the ways of being of each and every one of the people who make up the class. We work on intercultural tolerance and reflect upon the most effective strategies and tools for educational inclusion; we reflect upon how to improve the wellbeing of people with disabilities, their acceptance by the class and their active participation in the cooperative work groups.
- 1.2.4. Reflection should encourage complex thought; it should introduce analysis guidelines from different points of view while bearing in mind many elements at the same time, as does ecological science, which analyses the multiple elements that cohabit and cooperate in a specific ecosystem. Classrooms are complex ecosystems that interact continuously and change constantly.
- 1.2.5. We believe that students draw up new knowledge stemming from reflection. We equally believe that mistakes are a source of learning; many errors in scientific research give rise to new knowledge. For this reason we try to learn from the mistakes.
- 1.2.6. Ultimately, reflection leads us to raising our awareness of the need to transform; this transformation implies the advancement of human understanding: Human understanding, always intersubjective, requires openness towards the other, empathy, sympathy: The acknowledgement of the quality of the other is an indispensable precondition for all understanding. This quality is indispensable in everyday life wherever it manifests itself, at the most elementary level out of courtesy (Morin, E., 2014; pp. 57).
- 1.2.7. In order to achieve greater understanding we should bring into play all the skills, reasoning strategies, emotions, feelings and knowledge. We should teach and learn how to connect with the people who think, feel and live in a different way to ourselves, developing strong feelings of adhesion to social justice, assuming values of solidarity and of the peaceful resolution of conflict, changing habits so as to contribute towards the protection of the world that shelters us.
- 1.2.8. In this framework, the student teachers should turn themselves into the protagonists of their own learning (Dumont, H., Istance, D., & Benavides F.; 2010) and they should construct, draw up and rework new knowledge, knowledge that will stem from their initial conceptions, from their experiences and from their prior knowledge.
- 1.2.9. In order to feel the protagonists of their own learning they should intervene in the setting of the objectives, in the setting of the contents to be worked on and on the setting of the criteria that will allow us to know if we have achieved our objectives (assessment criteria or criteria of success). In this way, the teacher-guides of the subject can limit themselves in each context, classroom group or university collective.
- 1.2.10. In this sense, learning can never be a passive process; it should be active, integrating and dynamic.

1.3. Designing interactive contexts for exchange and collaboration

Reflection on action ought to happen in interactive, pleasant, empathic and tolerant contexts that favour the wellbeing of all the people making up the group. In these contexts, the debates and reflections posed favour learning, favour the establishment of links between the theory and the practice and favour creativity. We work in two contexts: in the classrooms of primary education centres and in the university classroom where the experiences and reflections that have arisen from our stay in the centres are shared.

After analysing the experiences, each student draws up a report setting out their conclusions. Included below are some examples that demonstrate the knowledge acquired about the different aspects observed and analysed. As the first important aspect, the students claim to have managed to relate the theory with the practice and that they believe that reflection on action is enriching for everyone:

The experience has been very enriching and we believe that proposals such as this should be repeated. It is through these practices and reflection on them that we can discover if the profession really motivates us and we can get an idea of the work involved. Reflection on practice is a fundamental aspect given that primary education teacher training degree studies are too theoretical (Florit, Núria; November 2016).

I have understood the theoretical bases that support the practice: the constructivist theory, meaningful learning, the perspective of globalised and relational knowledge and the principles of the inclusive school, centring all activity on the students as the protagonists of their own learning process. Stemming from these bases they work on common learning situations: study projects, workshops and settings, shared reading or mathematical games. Shared reflection and the description and interpretation of everything seen in the classrooms have allowed me to understand the importance of certain theoretical foundations that endorse the innovative practices (De La Peña, Cristina; November 2016)

They realise the processes of change and innovation that educational centres need:

We didn't realise that education had changed so much since we studied in primary school. This fact surprised us seeing as it has only been ten years since we were studying at primary school. In our day working together was unthinkable and even more so with pupils from different year groups (Febrer, Carlos; November 2016).

I have been able to see for myself how change has reached schools. We should learn to respond appropriately and train thoroughly. We will be the future schoolteachers and we will have to continue fighting to continue with these innovations; the aim is to improve training for children in order to allow them to adapt to a society in constant change. We only have to open our minds and start to tear down walls (García, Gemma, November 2016).

They also observe the need for a global and integral conception of education:

The centre works from an integral conception; they work on skills, abilities and contents and they prepare themselves to be competent in all facets of life, not just on an academic level but the social and emotional part is also educated (Huguet, Sara; November 2016).

They are very much aware of the new role of the schoolteacher in the teaching and learning processes:

I have been able to see for myself the new role of the teacher that we also apply in our classes at university. The schoolteacher listens, orientates, stimulates, guides research, encourages dialogue, creativity and the acquisition of the critical spirit, offers support, serves as a model and poses challenges. The schoolteacher accompanies the pupils in their learning process and should provide the necessary means for everyone to be able to progress in their learning (Juaneda, Marta; November 2016).

They are also aware of the need for a good working atmosphere amongst teaching staff:

One aspect to be highlighted is the good relationship that exists amongst all the teaching staff of the centre. This good relationship has a bearing on the work in the classroom given that teachers are seen to be enthusiastic and motivated. This enthusiasm and motivation can be observed in the boys and girls (Mogollón, Óscar; November 2016).

As is indicated by the previous quote, they notice the motivation that is expressed by the boys and girls in class working with complex proposals:

The working days in the schools were very thorough and enriching; the contact and dealings with the boys and girls is very fulfilling, they give you enthusiasm, innocence and the desire to continue learning... It is highly satisfying to see their interest, curiosity, and willingness to listen, dialogue and participate actively. We aim to establish a good relationship and we find that this relationship makes them feel important, acknowledged, it offers them security and it helps them to grow as people, people also with a critical eye, people who are free and, of course, happy people (Pons, Núria; November 2016).

The boys and girls showed, at all times, great interest in what they were learning and knew how to pose very interesting questions, just as we do in class. Their questions, I believe, are more interesting and in-depth than the ones we ourselves pose, which demonstrates the success of the educational approach (Pons, Lluís; November 2016).

One of the basic aspects in all educational innovation is cooperative work. Cooperative work entails going from "I" to "us" in order to construct shared knowledge. The student teachers have a very clear idea of the importance of this change, which they also experience themselves in their own classes:

The methodology advocates the active participation of the pupils; work is done to attain meaningful learning from cooperative work, from respect for diversity and for inclusivity: everyone equal in rights, everyone different. An aspect that is also very much present in the centre is that of sustainability: educating in values for a more balanced world and one that is respectful of the environment (Presecan, Ioana; November 2016).

What most impressed me was that they work cooperatively all the time; very rarely do they work alone; they get together in pairs, in small groups and as a large group; the boys and girls help each other, which strengthens the relationship amongst classmates and boosts their possibilities and increases their knowledge (Rotger, Joan; November 2016).

They also noticed that cooperative learning works with children of different ages and their results are excellent:

I was very much surprised that fourth-grade primary school pupils help second-grade pupils to read. It is a very useful activity given that it strengthens the bonds between pupils and both improve by reading. There is an atmosphere of calm and total concentration in the classroom and it is a matter of pride to be able to see how they help each other. Their faces express happiness and absolute ease (Sansó, Maria Isabel; November 2016).

We can observe how all the boys and girls carry out all the research work, organisation of the information and communication of the conclusions through cooperative work (Perelló, Pau; November 2016).

Another of the pillars of educational innovation is that of inclusion. Boys and girls from different backgrounds, cultures, religions, ways of being and ways of relating to each other coexist in the same classroom with almost no conflicts; they cooperate with each other, they help one another, they collaborate and learn how to coexist in diversity:

At break time we can observe, with admiration, that in spite of the enormous ethnic diversity all the boys and girls play together, without noticing any kind of social exclusion (Perelló, Pau; November 2016).

We have had contact with many different age groups and with boys and girls who were also very different from each other, with certain characteristics and particular needs, which allows you to understand just how important it is that they be the true protagonists of their own learning. Project work constitutes the core of innovation in the school and allows us to open ourselves up to a new conception of education (Bellido, Cristina; November 2016).

Many schools group the pupils together according to abilities or common characteristics. Educational research shows that this type of grouping is detrimental to the most disadvantaged and to those pupils with disabilities, given that it hinders interaction with other pupils. The design of heterogeneous classes is a condition for educational inclusion and a key element in innovation processes in centres:

Fruit of the shared reflection in class, we have verified that the classes should be heterogeneous with a minimum of between 17 and 20 pupils. Fewer pupils per class would make cooperative work more difficult and would considerably reduce the qualitative contributions in work projects (Febrer, Carlos; November 2016).

Likewise, it is to be observed that a large number of pupils per classroom makes attention and personalised monitoring difficult but that a reduced number (fewer than 15 pupils per classroom) would also imply drawbacks insofar as reducing the creative contributions and making the creation of cooperative work groups more difficult:

The school has classrooms with few pupils given that the town is small (1,500 inhabitants). We have learnt that the reduced number of pupils per classroom has advantages but also drawbacks; on the one hand it allows one to get to know pupils more and better and offer them more personalised treatment as well as being able to detect their difficulties and specific problems, but, on the other hand, a reduced number reduces the wealth of the contributions in interactive and cooperative situations; while at the same time there exist interferences with the family and social life of the pupils given that they know each other well and stereotypes are fixed on the basis of less objective criteria (Florit, Catalina; November 2016).

The in-depth knowledge of the traits of each pupil, their interests and motivations, the relationship that they have with their family and with their friends, the way that they resolve the problems that life poses for them, their way of acting and behaving in the face of the learning challenges are key elements for appropriate intervention. Schoolteachers should get to know each pupil in-depth so as to adapt their interventions to their needs:

The schoolteachers explained personal aspects of each child to us and these explanations allowed us to understand the behaviour of each and every one of them and their relation with their classmates much better. It was a global, thorough and complex experience and we learnt that each boy and girl has something to contribute; they have a rich inner life that can improve through dialogue and individual attention. In short, we were able to connect the theory with the practice; we believe that we now observe the class in a much more positive light, since we were able to verify that all the boys and girls can learn a lot, far beyond their possibilities, if the schoolteachers and the school generate an atmosphere of respect, of trust, of intellectual challenges and of personal growth stemming from cooperative work (Fedelich, Núria; November 2016).

Another of the most relevant aspects in all educational innovation is that of the participation of the families. Numerous studies highlight the fact that greater participation of fathers and mothers improve the academic results of the centre. The students also verified this fact:

We have observed that families play a key role. The boys and girls do not reach school with an empty satchel; each one of them has a family, certain experiences, a way of relating to others, certain habits and certain ways of being. The involvement, coordination and communication between the school and the families is fluid. It is normal to invite the family members to participate in classroom and school activities (storytelling, handicrafts, music concerts, carnival parades, project work...)(Babot, Joana; November 2016).

One aspect that really caught my attention was finding a mural at the back of the class on which all the fathers and mothers had written their desires in relation to their children. The majority of the desires had nothing to do with curricular issues (regarding the syllabus) but rather that they were basic principles to guarantee good learning: respect, happiness, being competent, non-competitive, encouraging responsibility and autonomy... (Frau, Llorenç; November 2016).

Dispensing with text books is a fundamental condition in innovation processes. In order to devise creative teaching and learning contexts and ones based on the interests and motivations of the pupils, we must do without totally and rigidly outlined materials that follow the order imposed by the prescriptive national curricula. In this framework the work projects are set as a way of organising the contents around a relevant question (guiding principle):

The school has opted out of having any text book; they have a wide range of diverse and varied learning materials; materials that deal with subjects from different points of view and with different languages (written, visual, plastic, tactile and so on). Furthermore, they also have computers connected up to the Internet and digital whiteboards (Pons, Núria; November 2016).

In the centre we were able to observe that they work without text books but rather through work projects; this involves a large amount of work in terms of preparing material on the part of the schoolteachers who are seen to be compensated by the motivation that the children express, which can be observed in the way in which they explain what they are doing and in the way that they show you their work and creations (Febrer, Carlos; November 2016).

Parallel to the work projects, spaces and times are made more flexible; timetables are flexible and many of the spaces are shared between different courses:

We were also surprised that the timetable was not divided up into subjects but rather according to work areas, which is to be admired and, for us, surprising, as well as the use and integration of new technologies in the classroom (García, Mar; November 2016).

The flexibility of the timetables seemed fantastic to me. They worked on many subjects during the whole morning but, I would dare to say that, the pupils were not aware of the subject they were working on given that everything was posed in real contexts and also globally. And children work a lot without realising it. This fact demonstrates that it is possible to make children reason in an autonomous manner, as we do ourselves, without the need for them to be kept in silence and seated in rows; all the classrooms are organised in a U-shape or in cooperative groups and the schoolteacher is a reference point that guides, accompanies and helps (Huguet, Sara; November 2016).

At no point did I observe any pressure or nervousness; quite the opposite, the pupils were calm and relaxed and the teachers accompanied each child, guiding and helping continually, without giving them the solutions; they help them to think autonomously, as we do in class, so as to come up with the solution (or solutions) in an autonomous manner (Fedelich, Núria; November 2016).

The design of the space is a distinctive feature of the innovative centres. Our students noticed this feature which facilitates interaction:

The philosophy of the educational line of the centre can be gathered from a visit to its premises: open and shared spaces, work corners, distribution of tables and chairs in the classrooms to facilitate cooperative work, materials and work displayed in the classrooms and in the corridors... (De La Peña, Cristina; November 2016).

The flexibility of the spaces and times facilitates the resolution of conflicts and the work on emotions and self-knowledge on the part of the pupils:

I was surprised how problems stemming from everyday coexistence could be resolved through debate. They were capable of reaching conclusions and, amongst themselves, of reaching agreements, while at the same time feeling appreciated; the conclusion in the face of a conflict was: the most important thing is to be a good person and a good friend. I was very surprised (Florit, Catalina; November 2016).

We have seen that in order to shape people who are sure, free and with appropriate self-worth it is essential to know how to manage emotions. This skill allows children to adapt to their environment and it enables them to face up to aspects of their personal lives in a more satisfactory way, especially those referring to their relationships with others, thus learning to coexist. We have seen that it is fundamental for boys and girls to be able to express and understand their emotions, while respecting those of their classmates and showing empathy and the ability to resolve conflicts (Bellido, Cristina; November 2016).

I believe that one of the basic aspects of reflection on action is the improvement of the learning processes, the confirmation of their vocation in the choice of university studies and the verification of the enormous potential of children in terms of learning and creativity. Their conclusions are highly relevant and demonstrate the validity of the approach outlined:

It was a very enriching experience and the subsequent debates clarified many aspects regarding the need to go more in-depth into innovative education. It was a great experience that reinforced our idea of becoming schoolteachers; the experience filled us both professionally and personally; we believe that on a personal level we have significantly changed our view of education. It was fantastic. Thanks (Perelló, Pau; November 2016).

I loved attending the classrooms and being able to reflect on what they do there. Just seeing the reaction of the boys and girls when we go into class, faces of joy and happiness filled me with satisfaction. I would have liked to have stayed given that we learn much more this way than in any theoretical class (Pons, Lluís; November 2016).

During our visit to the centre I realised that practising the profession is much more complex than it seems, but this will not be the obstacle that puts an end to my studies. The more complex and difficult the challenge is the more motivating it is, hence I feel very motivated to continue studying. I have seen just how much I can learn from the boys and girls while teaching (Rotger, Joan; November 2016).

During these days the pupils were very pleased with our presence; they were very attentive to us, they asked us questions, they showed us their work, and they explained things about their lives to us and asked us for help. They made me feel completely fulfilled and I would repeat this experience every day. I wish to be a good schoolteacher so as to be able to work and continue learning. I am more than extremely motivated after the reflections carried out in class. The fact of writing down what we experienced and trying to understand, interpret and transmit it has made us more conscious of our commitment to innovation (Sansó, Maria Isabel; November 2016).

The experience has been very enriching; we have learnt to listen to the children, to interpret their desires and motivations and to help them, through questions, reach the desired conclusions on their own. Quite sincerely we have learnt more from them than them from us. It has been amazing (Vilches, Adrián; November 2016).

One of the most noteworthy aspects is the innocence of the children; it captivates me. For this reason, at some point in the future, I want to spend time with them and that they can transmit their innocence, their joy and their love to me, while I can help them in their learning process and help to make them happy while being happy with them (Babot, Joana; November 2016).

In observing the children I was able to realise the capacity for learning that they have, from the smallest to the oldest; the incredible and surprising gifts of creativity, imagination and knowledge... What most surprised me was the gratitude and trust that they show when you pay them attention and show interest in their things; they made us feel welcome, telling us anecdotes about their lives and asking us all kinds of questions, especially those relating to our personal and affective lives. It is surprising the capacity they have to learn and establish relationships amongst all that they have learnt.

I have realised how very different they are and that each one shows certain different needs and interests and that, thus, the emergence of new knowledge and skills must be fostered. The work of teachers is fundamental to managing and organising the activities and resources so as to provide a response to all these potentialities (Pons, Núria; November 2016).

We believe that these final contributions of the first-year students of the primary education teacher training degree demonstrate the degree of knowledge acquired and the depth of their reflections as regards the principal cornerstones of educational innovation.

1.4. Conclusions

The university teachers should bear in mind that continual interaction with their students is a prerequisite for achieving sound learning. We understand that this interaction must achieve:

- That the students be involved in the teaching and learning process. To this end it is necessary that the university teachers plans with them the results that they hope to obtain and that he plan what the students should record, understand, apply, analyse, synthesize and assess. It is imperative that the university teachers shares and agrees upon the results of the learning so that the students share the goals and objectives to be achieved. Students should represent what they will achieve with the planned activities.
- The university teachers should expect something more than the mechanical memorisation of simple answers. They should teach their students how to reason through questions so that they themselves reach the proposed objectives.
- The university teachers should think out in detail in which contexts to place their students so that, through their own reasoning, they can come to question their previous knowledge, or propose situations to them such that their ways of thinking must be rethought, on verifying that they are not useful or of help for analysing and interpreting all types of educational contexts.
- If the students must be the protagonists of their learning they have to know how to obtain information, work on it and put it in order through certain pre-established criteria; they have to know how to develop in-depth understanding of the contents studied and they have to learn how to use them in other contexts and situations. Finally, they have to know how to communicate their acquired knowledge, in different formats, in order to make the result of their investigations known. One relevant question can guide the whole process: what can we do to make students autonomous and so that they can continue to learn outside of class? The actions that the university teachers undertakes stemming from this question will determine, to a large extent, the success of learning how to learn and of continuing to learn throughout life.
- In order for the students to feel that they are the protagonists of their learning we should encourage them to formulate good questions and that they can talk about their interests, motivations, emotions and feelings with total freedom. As teachers we will encourage them to establish connections between their questions and the contents that we are working on and that they formulate interpretative hypotheses that allow them greater comprehension of the phenomena studied. Likewise, we will induce them to pose experiments that allow them to go more in-depth into the contents worked on. This, as we previously said, means that we teachers should be willing to modify the path of the course according to their contributions.
- The university teacher should generate settings so that the students can work cooperatively, can reason together and help one another. We should favour those contexts of mutual aid so as to provide opportunities to those students who present comprehension difficulties, those of analysis, of reflection, of reasoning and of making inferences; we believe it to be demonstrated that between us all we learn more and better.
- We should devise complex contexts of analysis that suppose important cognitive challenges, posing deep conceptual questions. The motivation for learning does not arise from training in simple exercises; quite the opposite, motivation for learning is born of intellectually complex and interesting challenges. When the students understand that they are facing a challenge that they see as attainable they work much harder to overcome it and more so when they work cooperatively. It is very possible that these intellectual challenges involve contradictions and inconsistencies that they should resolve by use of their reasoning and reach conclusions that are scientifically valid and subject to contrast.
- The university teachers should centre all his efforts on stimulating reflection on the learning's and on what it means to think from interdisciplinary perspectives. We believe in the reflections expressed by the pupils we have quoted.

- There is a very important element in every teaching and learning process: believing that each and every one of the pupils can learn and to seek all the possible ways of achieving this. Good teachers should look for ways in which their students can continually receive information about their learning process, long before judging their efforts with a grade or a mark. We should create a non-threatening atmosphere, giving different opportunities to rethink what they are learning and to value their contributions, without the need to disqualify their work. We should ensure success not failure. Only in this way will they realise their true potentialities and that they can develop their capabilities to a maximum. All the students should learn how to evaluate the quality of their work and of their reflections stemming from certain criteria set during the process. If they are not capable of evaluating their progress then they have not learnt in-depth nor in a significant manner. The students should know how to identify and share what the best indicators are to understand certain specific contents. This entails their being capable of understanding their learning processes and of knowing how to devise ways of understanding it better.
- Communicative aspects (verbal and gestural) are very important in order to facilitate interaction. Communication is successful if it stimulates students into thinking. Through the modelling of reasoning strategies we can induce them to make an effort to understand complex concepts and to resolve important and difficult problems.
- Finally, those of us university teachers who think that innovation induces a professional, social and also personal transformation should create critical work settings in which we will insert reasoning skills and the information that we deem necessary through activities that the students consider interesting, authentic tasks that generate curiosity; problems that will challenge them to rethink their ideas and preconceptions and to examine their ways of thinking about reality. We must create a safe environment in which the students can try things out, make mistakes and learn from their mistakes. Only in this way will we manage to improve the initial training of the teaching staff.

We consider that the lines of work that we point out in this article are in accordance with the objectives that are proposed by international organisations such as UNESCO and such well-drafted studies such as that of Ken Bain:

Exceptional teachers conceive intellectual development as an understanding of a considerable corpus of material, learning how they learn (to expand understanding), how to reason by means of trials, how to make different abstract concepts useful, how to take part in conversations about thought itself (including the ability to write about the subjects of debate), how to ask sophisticated questions and the mental habits required in order to be able to use all of these abilities.

Personal development means understanding oneself (one's own history, emotions, temperament, abilities, perspectives, limitations, prejudices, suppositions and sensations) and the significance of being human; the development of a sense of responsibility towards oneself and towards others (including moral development); the aptitude to exercise compassion and the capacity to understand and make one's own emotions useful (Bain, K., 2005; pp. 201)

The document by UNESCO, *Rethinking Education: Towards a global common good?* (2015, pp. 58-59) expresses itself along these same lines. It clearly sets out what the objectives of the training of teaching staff are:

One has to train teachers so that they can facilitate learning, understand diversity, be inclusive and acquire competences for coexistence, as well as for the protection and improvement of the environment. They must promote an environment which is respectful and safe, encourage self-esteem and autonomy and turn to multiple pedagogic and didactic strategies. Teachers must demonstrate a fruitful relationship with parents and communities. They have to work as a team with other teaching staff for the good of the school in general. They should know their pupils and their parents, and be able to establish a relation between teaching and their specific context. They should be able to choose suitable contents and use them to advantage in the acquisition of competences. They should use technology, together with other materials, as learning instruments. It is advisable that teachers be encouraged to continue learning and evolving professionally (...)

Teachers' missions and careers should continually be remodelled and rethought in the light of the new demands and new challenges of education in a globalised world subject to constant change. To this end, pedagogical training at all levels, from the most general to the most specialised, must better integrate the essence itself of the transdisciplinary spirit: an interdisciplinary approach capable of allowing schoolteachers and teachers to guide us along the route that leads to creativity and rationality, in pursuit of a humanism of shared progress and development, respectful of our common natural and cultural heritage.

We believe that the rethinking of the initial training of teaching staff is fundamental given that innovations are becoming widespread in many global education systems and university studies should provide a response and put forward innovations in the centres. To this end, it is necessary to work in real contexts, encourage reflection on action and facilitate the acquisition of the professional capabilities of the students by means of reasoning, shared construction of meaning and the improvement in interrogation skills, by means of the formulation of open, relevant and complex questions that lead us to think more and better.

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