

The Ethical Assumptions in Higher Education



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Abstract Higher Education Institutions (HEI) have been challenged to rethink their action and to adequate their mission to new contemporary realities. These challenges have been posed by the characteristics of democratic societies which led to the expansion of compulsory schooling, increased cultural, ethnical and gender diversity of students, and also the volatility, internationalization of labour market, and by the ephemerality of knowledge caused by accelerated scientific and technological development.

Considering this perspective, it is the responsibility of HEI to support the development of knowledge and skills that allows young people to make free and ethic choices, based on shared values, including respect and participation. Living in society, at the macro, meso or micro level, requires technical and scientific knowledge, enabling individuals to pursue a profession, contribute for their integration, independence and autonomy, and to contribute to the social and economic development. This requires complex competences that empowers them to take ethical decisions in their profession and in their lives, assume and share responsibilities, to respect diversity and differences of perspective, to negotiate, to build consensus and relations of reciprocity. HEIs should include these ethical assumptions in their actions and organizational practices, making visible the values of freedom, equality,

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equity and solidarity. The incorporation of these ethical principles becomes more challenging at micro level, in the context of the classroom.

This chapter describes the ethical challenges that teacher/researcher faces during the teaching-learning process and his interaction with all the actors and how they can be applied in a teaching-learning activity. A case study is also presented, with two teachers and 40 students of an Informatics Engineering and 35 students of Basic Education programme. It highlights the importance of supporting pedagogical innovation in higher education, based on strong ethical foundations and on the development of collective learning goals and a shared vision.

Keywords Ethics · Teaching-learning · Social commitment · Higher education · Student's agency

1 Introduction

Within the mission of the HEI, and aware of the processes and the objectives, teachers have to be creative and sensitive in their practices, considering the interaction with the organization, the community and the students, ensuring their academic, social and ethical personal and professional development (Kemmis & McTaggart, 2005).

Ethical behaviours need to be stimulated during the teaching-learning process. This requires a change in the attitude of the teacher and also in the attitude of the students, with consequences for their professional and personal lives. This article describes the ethical assumptions in HEI and the ethical challenges that teachers face during the teaching-learning process and his interaction with all the actors and how they can be applied in a teaching-learning activity.

The development of an enabling environment, supported in democratic and participative principles, results in a community of learning. For that, it is necessary to develop teaching-learning strategies that help students understand the ethical assumptions implicit in the academic and professional life.

In this context, this study describes the teaching-learning process designed and developed by two teachers of two different higher education programmes. One in the degree on Basic Education, with 35 students and the other in the degree on Informatics Engineering, with 32 students. For this, the teachers developed strategies to allow students build awareness of who they are, what they know, the sense of belonging and becoming, and also the challenges that collaborative work bring in a learning community.

The case study shows that the learning process through the questioning, researching and dialogue has the potential to develop the sense of responsibility, the need to respect and be respected, the effort to discuss and get to the best collective decision (Flyvbjerg, 2002). Moreover, the evaluation of different moral standpoints, helps the students to adopt social and professional ethical behaviour.

Effective articulation, participation and responsibility sharing contributes to the development of the agency of the students. However, from the teachers' perspective, the implementation of the process is complex, requires time, effort and willingness to change.

2 Ethical Assumptions

The connection between the concepts of ethics and education is as deep as the relationship between *ethos*—the meaning of being human—and his self-fulfilment. Education is an area where the whole set of discourses, actions and strategies aim at the formation of man for a given society.

Ethics is understood as the study of human action, the accomplishment of the autonomy and freedom and the problematization of its moral subjectivity (MacIntyre, 2007). Education, the process by which a person becomes (and which involves the ontological dimension of the being and the epistemic dimension of knowing), should be configured in a pedagogy founded on the ethics of respect for dignity, which promotes the autonomy of the person in formation.

Education constitutes a mediating action between the subject, simultaneously complex and singular, and the reality that he experiences in each day. It is in this mediation that pedagogy was instituted as *phronesis*, usually translated as 'practical wisdom', sometimes as 'prudence', understood as the ability to think and act in relation to values, to deliberate about 'things that are good or bad for humans' [considering the Aristoteles definition, (Flyvbjerg, 2006)].

A person's action is developed in interaction with others, which highlights the moral assumptions related to his integration in the *polis*. There, the links between the microcosms of the *self* and the social macrocosms are established, and consequently the definition of regulatory mechanisms for such integration.

However, despite the issues involved in human interactions, ethical behaviour cannot be reduced to moral behaviours, considering that this retrenchment can lead the *self* to act from predetermined actions made by society, with no space for recreating himself. History has shown that the moral education conditioned human thought and action through a culture of ritualization, gesture and socialization that leads to the homogenization, contextualization and meta-projection of what is intended (Magalhães, 1999, p. 285).

On the contrary, we understand education as an emancipatory process that constitutes a space that enlarges, integrates and accepts man in the dimension of becoming and being able to transform, as proposed by Paulo Freire (1970). This perspective is based on a broader dimension of education, focused on interactional action, contextualized, renewed each day and sustained by ethical and humanizing principles. It is therefore, as stated by Dewey (1997) a century ago, rethinking education as a way of ethical reconstruction through Democracy. Whether it is through education that autonomy and freedom is achieved, school's role must

support the students in their project to become enlightened citizens, participative, with agency and useful to the society through their specific actions.

This framework contradicts the technicist vision of the school, which forms a technical rationality that “transforms students into recipients, controlling the thinking and action that leads men and women to adjust to the world by inhibiting their creative power” (Freire, 1970).

As highlighted by Gambôa (2004)

under the metaphor of ‘growth’ and the command of pragmatic reason, education is a process of conquest, a personal and social research / transformation where autonomy and citizenship are inseparable expressions of the same progressive (continuous and interactive) form of being: to be more, to grow, the path that leads morally to democracy (p. 11).

We understand, therefore, that regardless of the area, training in Higher Education must be understood in a praxiological dimension, whose ethics of relationships inform humanized action for the good of the professionals, organizations and societies where they are integrated. We assume a praxis-centred view of education, where theory and practice (or practice and theory) dialogue in a movement that favours the interpretation of experience which, in turn, leads to a better understanding of action and intentional modes of action, is based on a transformative pedagogy (Freire, 1970). A pedagogy that goes beyond the didactic, technicist or academicist vision of training (Houssaye, 2004, p. 10) to assert itself as a praxiology.

In this context, higher education organizations and particularly the classrooms where the pedagogical action takes place, and because there are students who are appropriating the specific knowledge about a particular profession, should be understood as professional learning communities.

In this sense, we understand a classroom as a social learning system because, like other social systems, it presents: (1) an emergent structure within which complex and dynamic relationships develop; (2) an organization of its own; (3) ongoing negotiations among members; (4) the shared perception of cultural and identity meanings.

The main idea recreated in this article is related to conceptualizations about the social nature of human learning, inspired by anthropology, social theory (Foucault, 1980; Giddens, 1986; Lave, 1988; Vygotsky, Cole, Cipolla Neto, Menna Barreto, & Afeche, 2008) and by the theory of systems, which places the learning perspective on the person’s relations with the world, understanding that the “human being is to be a social person in a social world” (Wenger, 2010, p. 179).

Classrooms, as social structures, develop professional and social learning because the involvement of members in this social context is accomplished through a dual process of meaning development. On one hand, members participate in the life of the group directly, performing activities, talking and reflecting about the knowledge needed for the profession. On the other hand, within the community, physical and conceptual artefacts such as words, concepts, documents, methods, narratives and other forms of reification are produced that reflect the shared experience from which actions are organized.

Building meaningful learning, in a social context, requires participation and reification in an interconnected way, thus constituting an active, dynamic and living process of learning (Wenger, 2010).

This framework supports the study described in the following sections, which narrates the efforts of two teachers and their students in the construction of two learning communities, supported by the awareness of the singularity and the complexity of each element of the group, respect for cultural diversity, the importance of building a sense of group and the development of strategies that enhance the development of skills necessary to solve complex problems, think critically, be creative, demonstrate emotional intelligence, be able to judge and make decisions, work with others and adapt to new situations.

3 Methodology

The case study described in this chapter encompasses two classes from two different programmes, one in the Basic Education and another in Informatics Engineering. The values and ethical assumptions for each profession are dictated or specified by professional associations or orders. However, as stated above, as citizens of a democratic system, students should develop ethical awareness and democratic participation regardless of the profession and scientific area. Thus, among others, the responsibility of the higher education teacher also includes the stimulation of this awareness through the development of the teaching-learning process and the definition of adequate class environment based on these principles.

In this multi-context case study, the teacher starts by relinquishing his instituted power, opening the opportunity for the development of the students' agency (Pijano, Scott, & Knight, 2014). Students are included in all the aspects of the teaching and learning process, such as the design of the pedagogical methodologies, the definition of the content, and the pace to follow (Gülcan, 2015).

The methodology follows a descriptive and interpretative approach based on multiple data collection instruments and techniques, including class observations, field notes, students' written work, open question questionnaire and the individual portfolio. The approach starts by asking the students to formalize their (self-) learning contract, in which they describe their learning objectives and attitude (Table 1).

During the semester, students were stimulated to adopt a joint intellectual effort between colleagues and with the teacher, in a process of collaborative learning, with influence in the students' achievement, persistence, and attitudes about learning, contributing to equal participation by all members of the team, working with the others in a collaborative and friendly way, increased conceptual learning or increased engagement (Knoch, 2004). They work together in heterogeneous groups, assembled and organized through several group dynamics techniques, fostering their communication skills, inclusion awareness and commitment (Mesquita & Lopes, 2018). During the semester, students are required to prepare inter-group and

Table 1 Collected data

Material	Description	Timing
Learning contract	The self-learning contract, written by the student and presented to the class	Beginning of the semester
Group definition	Open-question questionnaire to assess the students' opinion about the importance of group definition strategies	Middle of the semester
Field notes	Teachers' written field notes	During the semester
Class observation	Class observation video and comments	Beginning, middle and end of the semester

Source: Author's own table

in-group presentations, as well as written reports. This gives students the opportunity to assume an active role, through the strategies of questioning, researching and dialoguing, to develop the sense of responsibility, the need to respect and be respected, the effort to discuss and get to the best collective decision.

Teachers register field notes and commented observations of remarkable situation in the classroom (Lopes & Mesquita, 2016). Finally, at the end of the semester, a closed question questionnaire is distributed through the students to assess their satisfaction with the pedagogical methodology and the success on the teaching-learning process.

The qualitative approach was performed through content analysis, with data triangulation and cross-verification of the collected evidence of both contexts (students of Informatics Engineering and students of Basic Education). Content analysis allowed to create a category system that emerged from the collected data. Data will be presented based on the reflections, field notes collected by the teachers, coded with the letter R and FN respectively, followed by a number. Students were also represented by a capital S followed by a number.

The results are discussed in a narrative that emerges from the teaching-learning process developed in the two curricular units. This process was developed in order to promote students and teachers' ethical attitudes and the formation of the learning community from three strategies: (1) the establishment of learning contracts as an instrument to foster self-awareness about each member's singularity and complexity, and the diversity of the group. The objective of this strategy was the create an enabling environment, an atmosphere of openness, respect and empathy among all the participants; (2) different strategies of group formation, considering the necessary transformation of the group into a learning community. Two strategies were used for students to participate and develop a sense of belonging and sharing; (3) stimulate collaborative work and the development of necessary transversal skills considered relevant in social and professional experiences.

4 Results and Discussion

The results were discussed in light of the necessary ethical attitudes to build a learning community, such as: respect for students' diversity, assume equal opportunities for learning, involve the students in the learning process, develop creative classes, work cooperatively, communicate (teacher-student; student-student), negotiation and establishment of consensus.

The study was developed in the classroom, excluding online and e-learning scenarios. The experimental comparison was performed in the classes of Network and System Management (N = 32) and Didactics of the Knowledge of the World (N = 35).

4.1 *Enabling the Environment: Creating an Atmosphere of Openness*

When students enrol a higher education programme, they follow some inner desire or conviction, usually associated to the possibility for a better life (Kelly et al., 2017). Regardless of their main motivation, what they are, the challenges they faced, the options they did, and all the previous academic, personal and professional experiences made the student what he/she is in the moment he/she starts studying at a high level. This starting point define the attitudes of the students towards the colleagues, the teacher and their own learning process. Their perception regarding the learning process, the professional requirements and the learning the procession process contributes to their ability to learn, to collaborate, to communicate as well as to their openness to develop moral attitudes towards the profession.

At the beginning of the courses mentioned in this study, students are requested to write a learning contract, in which they should provide answers and reflections about seven questions: where have I been? where am I now? where do I want to go? how do I get there? how will I know if I have arrived? how do I evaluate my learning? what measures do I need in order to assess myself?

The learning contracts were an important instrument for the awareness of all the elements of the group about the human condition. Students were invited to present their learning contract to the group, which allowed all to recognize a common humanity and, at the same time, the cultural diversity of the colleagues.

From the data analysis, of the text written and the observations performed by the teachers during the presentation, several aspects emerge. In this study, four categories were considered as fundamental: (1) the assumption of the human singularity; (2) the consciousness of the diversity; (3) the self in the professional option and (4) the necessary articulation between affection and rationality.

1. The assumption of the human singularity

A relevant aspect that emerges from the data analysis is related to the importance that students, from both courses, to reveal their human condition, reflected in the narrative that details their personal and familiar paths that led them to the study degree and the institution. These narratives give relevance to their human and social frailties.

One of my goals is to be someone in life, to live my life the best way possible. And, perhaps, to return to my family everything they gave me, because without them it would not be possible for me to attend the degree I always wanted (S3, GSR).

A week before I knew I was coming to here, my father passed away. There were many doubts about coming, but it was the willpower that my father always had that kept me going and would not give up something that I always wanted because of his death, as he asked us so much (S9, LEB).

Express the pride of the options and situations of their life

Almost finishing the degree, I can say for sure that I made the proper choice, I chose what I like, and I would do it again. The university path, although difficult, is worth it, this degree gave me, beyond practical and theoretical knowledge, an excellent thrust to the future (S1, GSR).

Express their responsibilities in their options

It wasn't an easy decision, mainly because of economical reasons. I had to work and study and, in this led me to choose a technology degree, because it was available in my home town and I was able to harmonize both things (S2, GSR).

Students were able to exteriorize their singularity, their life, giving to the colleagues and the teachers, in a selfless and generous way, all their intimacy, their complete and complex being that includes their mental, psychological, physical, affective, intellectual and subjective self.

In this process, the teachers, in their double function as teacher and researcher, payed attention to the presentations, actively listening, respecting each student's time, inducing silence and questions, and supporting the class members in the development of mutual respect and in the development of empathy, necessary to the human experience, reflected in the academic and professional relations that each will have to assume. In this respect, some students refer:

I never thought that there were so difficult lives (...) the teacher knew how to give the necessary time and space for S10 to express, unquestioned, telling us with her gaze that our silence was the best way to support her (FN13, LEB).

I never imagined that in a higher education class I was given the opportunity to talk about what I am and what I intend to be. This work [learning contract] helped me to know my colleagues better, to understand that we all got here with different previous experiences. That it is necessary to respect the colleagues, because each one of them has important aspect in their life that made them what they are now (FN13, LEB).

2. the consciousness of the diversity

The understanding of the other implied, from the students, the awareness of the cultural diversity, the academic, the rhythms, paths, wills and expectations about the degree. The consciousness of the diversity is remarkable in some of the students' words:

I was two and a half years with these colleagues and only now I was able to know something about them. It is so interesting to see where each of us came from. Now I understand better the situation of many of the colleagues (FN7, LEB).

I am now aware that we don't think all the same way, but that each of these students is a person that needs to be respected, just like a child with whom we are going to work. To do a learning contract should be mandatory (FN5, LEB).

Technical knowledge is not everything. For me, the true value of the degree is in keeping with the teachers and colleagues. Sharing knowledge is essential, as well as sharing real experiences with others. This is something that a self-taught cannot do (S2, GSR)

It seems to emerge, from the students' words, the awareness of the diversity if the group members, assuming a mean to develop tolerant relationships at the service of democracy. To assume democracy in the group supposes to feed on the diversity of opinions, both the for and against to rethink and rebuild their own ways to see the world, but also for the negotiations, the development of consensus and the free expression of ideas.

3. The self in the professional option

Most of the students reveal a positive image of the profession, assuming that their choice was not taken on impulse, but that it was supported by their connection to the degree. Their choices are often influenced by their representations about the profession that allow them to anticipate the pleasure it will provide them in the future.

With 18 years old, the time for all decisions, to choose the degree that possibly would define my future could be the most difficult thing to do. It wasn't in my case. I always liked the technology and the potential of development and evolution, so engineering would be my starting point. Second, I was interested in manipulating and developing applications, websites, systems and other things. So, the idea of Informatics Engineering would be the most appropriate choice. In addition, the high rates of employability are also a fundamental factor for choosing this area (S4, GSR).

If the aptitude that I think I have for the area of Education is confirmed on the exercise of the profession, I imagine myself to be a teacher in the initial years of schooling. Since I was a little girl, I built up the idea of what would it be to be a good teacher. (...) Being autonomous, being responsible and able to create positive, constructive and lasting interactions among all those involved in the educational process. Being able to do differently, to high scope, not to be attached to a physical space, bounded by the walls of a classroom (S11, LEB).

4. the necessary articulation between affection and rationality

The students were situated in the academic learning that they carried out until that moment. What seemed most obvious, became the most dubious. After all, what do I know about this curricular unit and what do I want to know? This was an issue that involved their reflection on the academic and professional knowledge essential to the exercise of the profession. They wrote what they knew, what they wanted to learn, and assumed that the unknown and the pleasure of learn more aroused their curiosity. They have revealed awareness that the teachers and the methodologies they use will be important for their involvement, for the construction of community-based learning to be shared and challenged.

My knowledge about Network Systems is not enough, which is why I was curious. After a brief survey I learned that this area is increasingly playing a key role in information technology. In reality, this is a very demanding area from the technical point of view, largely because of the enormous range of technologies and services that the administrator must know in order to be able to ensure the correct functioning of a computer network (. . .). I have high expectations regarding the curricular unit because the teacher was able to arouse our interest with the challenges proposed, and with the interactivity of a “game” in which we will have to conquer our castles, after the teacher explained the motivation of the class in the overall was at its maximum (S1, GSR).

Since my first enrollment in the LEB, the learning was not merely curricular. As we progress in the sequence of content, informal learning also stems from the interpersonal contact that naturally exists. In this concrete curricular unit, I know that it demands adequate curricular articulation and I know that the strategies that the teacher use lead us to participate, to open our minds and to reflect on what we are learning (S24, LEB).

Learning contracts allow students to situate themselves in the group, to understand that the construction of a community, where everyone felt they belonged, would imply respecting their diversity, providing equal opportunities for learning, getting involved in the learning process, communicate their learning processes, open their minds to build shared knowledge. The conditions were set for building a learning team. In the following section the process, the advantages and the difficulties of constructing a learning team are described, with students who are inhabited by an academic model of learning.

4.2 *Group Formation Under Different Strategies*

Building a learning community on a praxiological approach requires the creation of conditions that promote the development of skills necessary to solve complex problems, think critically, be creative, demonstrate emotional intelligence, be able to judge and make decisions, work with others and adapt to new situations. To achieve these skills, it is necessary to introduce changes in the way students learn and, consequently, in the way teachers teach. In this context, the use of small groups has been increasingly prevalent to foster students’ interactivity and problem-solving skills (Roschelle & Teasley, 1995; Stump, Hilpert, Husman, Chung, & Kim, 2011;

Van den Bossche, Gijsselaers, Segers, & Kirschner, 2006). This presupposes that students are selected and integrated in specific teams, according to some group formation strategy.

There are several strategies for group formation. Broadly, the groups can be formed by the students, by the teacher or independently, with the help of automated tools or applications. Each approach has specificities that value some aspects and neglects others. For example, student selection groups can lead to less diverse teams and fail to integrate some students, leading to a feeling of being left and to reduce the potential contribution of the elements that were left out. Intentional teacher formation strategies require a good knowledge of the characteristics of all students and to have the sensitivity to the effects each has in a group. Finally, random assignment means that each student in the class has an equal likelihood of being selected into a group (Chapman, Meuter, Toy, & Wright, 2006; Maqtary, Mohsen, & Bechkoum, 2017).

As referred previously, a questionnaire was applied to assess the students' perceptions about group formation strategies. A total of 47 answers were received and considered valid, with 22 from Didactics of the Knowledge of the World and 25 from Network and System Management.

From the open-question data, the following analysis emerged:

1. Student-selected group formation

Students are unanimous in referring that they prefer this method of group formation. They believe that if they feel comfortable, they are more available to learn:

Working in groups formed by students is always an advantage, because feeling comfortable is the best way to be "relaxed" in the learning process.

They clearly assume that they prefer choosing the colleagues with whom they feel comfortable with:

This method gives students' the responsibility to choose their team colleagues. In this case, it is normal, and it always happens, at least I speak for myself, we are able to work with the colleagues that we know better, are our friends, or that we had worked before, because it is easier because we already know what to expect.

Another advantage they identify is the previous knowledge of the team members. If they know their colleagues, they know what to expect, how to behave and this makes it easier to coordinate the work:

I prefer working with the colleagues I choose, because I know that I get along well with them, I know how they work, and it is easier to coordinate the task development.

On the other hand, there are also some disadvantages. If the group elements stay together for a long time, some irritation or disagreements can occur, which can lead to poor working environment:

It will create a bad mood within the group and, in the next tasks, they will feel that the [disagreement] will happen again and the bad mood will continue.

They also identify, as disadvantage, that students may never be selected by their colleagues, either because they are not well known, they arrive late, or they are shy:

The biggest disadvantage is to continue to isolate the members that were not able to form the groups in the beginning of the semester, by having got late or other reasons.

In these situations, changing the group elements may be beneficial.

2. Teacher-assigned groups

Although there are several possibilities for teacher-assigned groups formation, this theme refers only to randomly assigning students to teams. In the classroom, most of the random assignment was performed with a deck of cards, in which students selected cards randomly and they were put together according to the number of the card they drawn: ace, ones, twos, threes, and so on. This method works well for groups of four elements. With groups of more elements, the suite was used: clubs, spades, hearts and diamonds.

This random assignment appears to be fairer, since contributes to equal opportunities, in the sense that all the students have the same probability to belong to a given team:

When teachers select the groups, exclusion situations, confusion in the selection process and other problems do not happen.

In addition, they also think that this method of group formation contributes to further develop communication skills, since they have to come forward, overcome the shyness and assume the responsibility to allow the task to be successful:

Since the group members do not know each other well, they have to overcome the shyness and start communicating, which will help develop the communication skills of everyone with the people that they do not know or that they do not usually relate.

This attitude depends on the social skills of the members. If they cannot overcome the shyness, if they fail to start communicating, the work will suffer and the communication between the members may fail:

The main disadvantage is the fact of people not feeling comfortable with each other, reducing the communication.

Moreover, the random assignment of members can also lead to unbalanced teams, lacking equity or diversity:

There can be elements that are lazier in the development of the tasks, or with less individual responsibility, because some think that since the work is to be developed by several students, some will do the work for them. When working in teams, we are participating in a "team game", where we have to succeed. The product of our work will be presented orally or in written, by a representative of the group or by all its elements.

Regardless of the group formation strategy, students also have a rigorous perception of what it represents being a group member and the benefits of working together.

3. The learning community

In relation to working in teams, it is possible to identify several categories in the students' text. In addition to the advantages and disadvantages, they also mention the competences developed, and the conditions for the successful development of the task.

Working in teams, regardless of the formation strategy, clearly contributes to equal opportunities, as described in the following excerpt:

There are more help and support between team mates. If one member has more difficulty with a task, all help, because all want to be successful. It is very stimulating both in the development of the task and in the learning process, always stimulating to do more and better, not for being better than the other members, but to increase the knowledge of all, so that all members win.

On the other hand, the disadvantages lie on the lack of commitment of some elements:

Impossibility to complete the task because some element forgot essential material that was of his responsibility.

Lack of responsibility and laziness:

Insufficient individual responsibility and tendency for laziness by some elements.

In addition to the cognitive knowledge developed with the development of the task, students identify the development of communication skills as the most relevant development resulting from team work:

It [working in teams] really helped me, mainly communicating with the others. I can say that I was a very shy person and I was always afraid of group work.

Of course, group work is only successful if a set of conditions are met. Members should demonstrate flexibility towards the exchange of ideas and integrating the others:

It can be successful, if there are some flexibility by some team members.

Work is also more successful if the team members have good communication and articulation:

If the group elements go along well, if they respect each other and the others' opinions, it is easy to work with them [...] the cooperation between the elements, help, shared responsibilities and balanced tasks contributes to successful and pleasant result.

Another condition for successful team work is the previous knowledge of the members abilities. Students constantly refer that if students know each other, they will work better together:

The fact the students knowing each other, and their work methods is very important, because it contributes to better cohesion and understanding throughout the development of the task.

Finally, responsibility is of paramount importance:

If the group has members that work but one promises to work but fails the objectives by lack of commitment or by laziness, this leads to the members working alone of by themselves.

Students realize that working in teams is important to their learning process and that prepares them better to work in the modern society. It helps them develop a set of competences that wouldn't exist otherwise. However, successful work depends on some conditions.

4. Change the groups with every new task

The students' perceptions regarding their participation in groups that change with every task is structured in advantages and disadvantages. The most remarkable advantage is the constant challenge they face when interacting with different colleagues in every task:

I have been having a notable development and facing new challenges because I have to learn to adapt and accept working with new people in several tasks.

Different people are characterized by different knowledge, background, way of working and personality. This enriches the team work with a healthy diversity:

Each element has a different personality and his knowledge can be better in an area than in others. The elements complement each other, bringing new perspectives and approaches to each new task.

Equal opportunities are also identified as an advantage, since:

If each task were solved by different teams, students would have to work with everyone else, helping also the closest and the shyest.

They also refer learning different ways of working, better communication skills and better inter-personal relations:

Many times, we have to deal with a group that has to come quickly with creative solutions. I'm always learning new ways to come up with the best solution. Dealing with different people all the time contributes to widen our inter-personal relations.

Finally, maintaining the groups formation through the semester also has some advantages.

5. Maintain the groups formation through the semester

The main advantage is the deepening of personal relations:

In the groups that are kept unchanged through the semester I managed to create a deeper relation with the other members.

The disadvantages result from getting too much comfortable, which can lead to tense situations and difficulty in meeting the objectives and the deadlines:

Teams that don't change can result in less successful tasks. If the members are too much comfortable, the communication and coordination between them suffers, with members assuming all the work and others relaxing and failing to keep the shared responsibility.

They also identify less equality, since:

It continues to isolate the students that did not manage to form groups in the beginning of the semester, because they were late or any other reasons.

Regardless of the group formation strategy, the main benefits of group work remain. Students recognize that among some advantages and disadvantages, there are important competences acquired in group work, contributing to equal opportunities. On the other hand, the disadvantages lie on the lack of commitment of some elements, as well as some potential lack of responsibility and laziness (Mesquita & Lopes, 2018).

The perception of the students in relation to several indicators regarding the two possibilities of group formation (groups formed by students and groups formed by the teacher) gives a clear understanding of how they like to work and their perceptions of the team work and about the difficulty to engage in a learning community.

They understand that working with others helps them to learn different ways to work together and they feel that this is important for their development. They also value the exchange of experiences and the respect of the others' opinions.

Looking at the results from the better distribution of the tasks, more effectiveness, it is possible to understand that if they know each other's capacities and skills, work will be more successful. However, these indicators are unbalanced with the less commitment with the tasks and with the higher tendency for a single leader. Students recognize that in student-selected groups, although they are more productive, organized and successful, there is also less commitment and concentrated leadership, which is inconsistent.

The majority of students prefer the comfort of working with whom they know, maintain personal relations of have worked before instead of working with random colleagues.

4.3 Collaborative Learning

Assuming the ethical values defined in the framework of this study, the social-constructivism approach was considered, as a pedagogical approach that allows the student to be active in the construction of his knowledge, in the context of an enabling social and emotional environment, built through the interaction and negotiation with the others (Dumont, Istance, Benavides, & OECD, 2010). Classes that assume these principles adopt methodologies that foster collaborative learning, in which students work together, being responsible for their and for the others' learning, learning with technology, in which the latter is an element support the students learning and implement meaningful teaching-learning experiences, formative assessment, as a self-regulated assessment process that allows students to achieve better results, inquiry-based approaches, assumed as relevant to the development of higher-order thinking skills (Lopes, Mesquita, Rio-Rama, & Alvarez-Garcia, 2018).

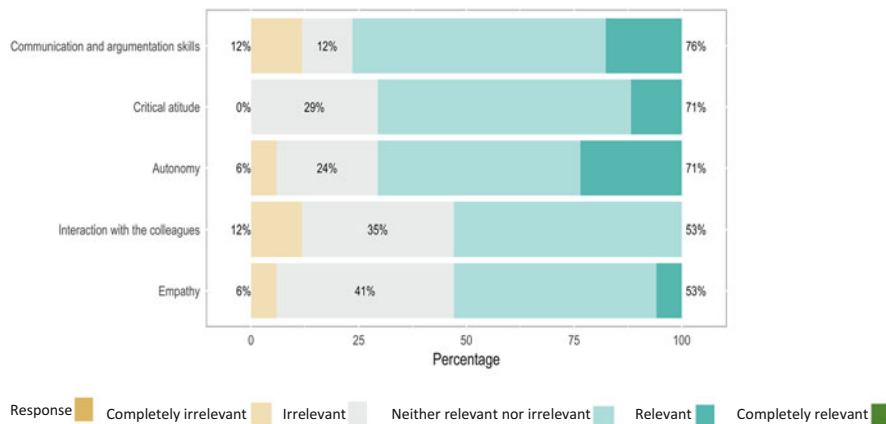


Fig. 1 Development of ethical skills. Source: Author’s own figure

In this context, collaborative learning plays a fundamental role, providing the students with opportunities for developing routines and abilities related to work planning, resource organization, problem solving, delegation, respecting the others opinion and work. Students work together, being responsible for their and for the others’ learning. This methodology takes a long time to develop, because students are used to traditional teaching-learning strategies, which appeals to individual action, passive role and little receptive to the others’ ideas.

The pedagogical methodologies followed in the two courses mentioned in this chapter, beyond valuing the participation of the student in the dynamics of the learning process, are also designed with their participation and contribution, engaged in enabling environments that stimulates active and experiential learning, with the constant guidance of the teacher (Lopes, 2014; Lopes & Mesquita, 2016).

The development of higher-order thinking skills happens simultaneously with the development of the cognitive skills. Considering the characteristics of the subjects and the degrees, as well as the learning experiences designed within the pedagogical strategies, five skills were considered: communication and argumentation, critical thinking, autonomy, interpersonal relationships and empathy. Each of the skills was sorted according to the importance attributed by the students, from the most important to the least.

Students considered that collaborative learning contributed, in the highest degree, for the development of their communication and argumentation skills, immediately followed by the development of their critical thinking and autonomy (Fig. 1). They valued moderately the work and the interaction with colleagues as well as the empathy, confirming that they believe the work could be more comfortable if more self-centered.

5 Conclusions

This study reveals that, to assume an ethical dimension in the classroom, it is necessary that the teaching methodologies change as well as the students' attitudes. It is clear that the development of an enabling learning environment, where the students feel that they participate and effectively contribute to their learning process. However, the introduction of these kind of approaches in a specific moment in the academic path of students is insufficient for the development of a community of learning. The connectedness between subjects and areas will be necessary to reward commitment to quality on teaching and learning processes.

The learning contracts resulted in a facilitating instrument of the development of meaning of belonging, which further allowed each student to situate towards his singularity and to accept the group's diversity.

To provide meaning to a community of learning, implies the development of the feeling of belonging. However, although students consider important to work with all the member of the group, they reveal some bias. Although students prefer the student-selected group formation, they value more the competences and the characteristics that teacher-assigned group formation stimulates in them. Moreover, the challenges that arise from the organizations and from the modern society require that students are prepared to work with different people and to deal with the social diversity. In this sense, it is important, that team work allows them to contact with this cultural, social and intellectual diversity.

Most of the students considered that the learning experiences contributed to the development of community of learning. The role of the teacher is fundamental both for the design of the whole process and for the monitoring and guidance of the students. In this type of strategies, the participation and involvement of students demand a constant and up-to-date feedback. This is one of the aspects that has to be improved, according to the students' opinion.

Education institutions should organize the courses and the methodologies in order to make effective and systematic the participation of students in groups that allows them to work with different colleagues.

The study would benefit from a wider scale implementation, to better assess the implications in more areas and more students. Moreover, it is also beneficial to assess the impact of this process in a longitudinal study, that could reveal the ethical assumptions of students during their professional activity and personal lives.

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