

Active Learning and Self-Determination for the Management of Differences in the Classroom

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ABSTRACT

The contexts of active learning, be they cooperative or flipped, are considered environments in which effective forms of learning are developed and students report greater satisfaction of basic psychological needs, intrinsic motivation, and interest in the subjects studied compared to the peers included in classes with traditional teaching methods. The aim of this study is to investigate whether there are differences between students with disabilities and without any pathology, included in active learning contexts, in the level of satisfaction of basic psychological needs, in the perception of skills, in the perception of the classroom climate and in the motivation to learn. 100 students (age: $M = 16.99$; $DS = 1.808$), 33 with disabilities and 67 students with typical development were involved. The results confirmed, in addition to the impact of individual factors in the motivation to study (psychological needs and perception of skills), a significant relationship also emerged with the classroom climate, with the teaching strategies of active learning and functional and self-determined levels of motivation to study.

KEYWORDS

Active Learning, Disability Learning Climate, Psychological Basic Needs, Self-Determination

INTRODUCTION

In the study of active technological skills, specifically flipped classroom and cooperative learning, as pedagogical models capable of producing effects on the self-determination of students with and without disabilities. This is a way of tackling all the obstacles to learning that can be faced by our children, so that they can be active subjects of their learning. This is a concept of media strategy, suitable to implement the construction of knowledge by the boys at the same time. This is, of course, a modification of the dynamics of the class, as well as of thinking by the student and the use of psychological processes such as attention, perception and executive skills, in particular, the perceptual categorization of concepts and thought, which develops neuropsychological architecture that needs mediated and highly supportive learning contexts to make itself explicit. In storytelling, the approach in the “flipped” classroom moves in particular with its model and its innovative strategies, and with its languages and relational modalities that ensure a process of information, thus fostering the development of everything in each subject. The flipped classroom, in particular, we repeat, favors greater personalization, as the students who live and work in an inverted class are activated according to their own rhythms, their times, and above all, reciprocity. In addition, as Ash (2012) points out, the term “flipping” refers to the idea of exchanging class work assignments, as well as leading students to act with greater responsibility in the direction of enhancing learning and its basic prerequisites. This is why this approach enters a space for reflection within inclusive education, enriching the educational-didactic practice of new strategic methods that combine the analogical level with the pragmatic one, forming a didactic mediation that is fundamental for developing processes of understanding, that is, mental operations as bases for the representational construction of knowledge. In fact, it is precisely within the space of the upside-down classroom with technological mediation that the subject will be stimulated to modify the schemes in his possession to envisage new operational possibilities to face the many inputs and tasks imposed by an emerging situation. In short, the goal is to make transactions between his system of preconceptions and his experience mediated by a whole series of strategies to which he is submitted to achieve significant goals in knowledge and at the same time to self-regulate his behavior.

In fact, until recently, the frontal lesson was considered the central element of the didactic activity, while today, in a school emptied of its traditional formative-cognitive function, the exposure phase of the contents has become less relevant than that of their sharing and interiorization. The working phase of active learning in the classroom with the students is no longer based on memorization and mechanically repetitive activities but on the active construction of knowledge through specific research methodologies, problem solving, and decision-making activities. The disciplinary contents are not, therefore, simply presented to the students but made to build through a process of rediscovery and reinvention that naturally is not spontaneous but guided by the teacher. Only after this phase does exposure to the contents become useful, even in traditional forms. Work at home also interacts with the activities carried out in the classroom. In fact, through in-depth studies and research on the topics of the lectures, the students connect the various acquired information, which will then compare with the teacher, experimenting with strategies to acquire increasingly refined and self-determined knowledge essential to ensure the consolidation of learning in the short-term and long-term (Fulton, 2012). Obviously, digital content, video lessons, or particular technological tools such as Facebook, Twitter, YouTube and Skype could be adequately designed and used to facilitate collaborative learning in the flipped classroom. In fact, the inverted class model can enhance collaborative learning, through which students learn and build their knowledge through group interaction and are led by the teacher into deep learning activities.

The use of teaching strategies alternative to frontal teaching facilitates, therefore, the acquisition of autonomy and skills, basic and transversal, and indirectly contributes to increased motivation and self-esteem. However, it is true that, in some cases, the use of innovative didactics may be difficult, not functional or ineffective if the skills of the teacher and/or students are inadequate to the task

requested or if the teaching methodology is incompatible with the cognitive needs, emotional and behavioral, of the class. Therefore, it is essential to carry out a careful evaluation before choosing the most appropriate teaching method and to calibrate the teaching based on students' real potential and expectations in order to improve and maintain the students' learning and self-determination at high levels.

In this regard, the ability to choose and decide effectively is one of the most important skills that students should be able to master for success at school and in professional life. Promoting self-determination is therefore the framework within which to teach students how to make effective choices and decisions, that is, choices that are important to the student and that are advantageous for him, especially in the future (Deci & Ryan, 1985; Ryan & Deci, 2000; Wehmeyer, 1992).

At this point, it is interesting to ask which teaching practices are most suitable to promote self-determination and facilitate the decision-making process and self-regulated learning in students.

Self-determination is a combination of skills, knowledge and beliefs that pushes the subject to commit to achieving a goal, through self-contained and self-regulated behaviors and actions. Understanding, therefore, one's strengths and limits is essential for self-determination and for individual perception of effectiveness. Self-awareness favors in the subject a greater ability to control his own life and his present and future actions, and greater self-determination. This can and must become the essential objective of every educational path, which is realized through the use of teaching that goes beyond the traditional teacher–learner relationship and that rather involves everyone—teacher and students—in a circular and dynamic relationship able to facilitate the emergence of deep and complex skills, such as decision making, cooperation and self-regulation. If, in fact, teaching was supported by students' self-determination, this would substantially facilitate learning not only to absorb content but also to gain other skills, ranging from self-awareness to the ability to enter into relationships with others.

In this regard, numerous studies emphasize that many of the skills and competencies of self-regulated learning and self-determination are in fact supported by the dynamic interaction that is activated between the various subjects involved in the learning process. In fact, the self-regulated and self-determined students are those who show themselves to be most competent in the management of social relations and in the ability to collaborate and cooperate with peers (Newman, 2002).

This is why it is fundamental to encourage more teaching and learning techniques aimed at promoting prosocial and collaborative skills, in the belief that cooperating is an alternative strategy of proactive, self-regulated and organizational learning that facilitates the achievement of autonomous and successful performance (Chen, 2002).

Organizational learning and the flipped classroom become therefore not only models to be inspired by the start of processes to improve management practices but also operational schemes to organize continuous learning processes in order to encourage the strengthening of the self-reflexive capacity of the class group. A learning that becomes an expression of the quality of teacher training that, in a flexible and attentive manner, must reread the needs and experiences that continually emerge from the context in which they find themselves acting. It is obvious that in order to achieve this, it is necessary to enter the gear of the new, turning more attention and availability to new technologies, to colleagues, and at the same time looking at the student as a person, that is, as a subject with rights and duties, as a future citizen, and as a traveling companion—a subject that is not only interactive, but also cooperative through his choices, the expression of his needs, and his involvement in decisions concerning himself.

Self-Determination Theory and Active Learning Contexts

Much scientific evidence supports the effectiveness of educational strategies active in promoting academic performance. Alongside this line of research, however, there are studies that demonstrate how intrinsic motivation is the key to achieving better academic performance. Helping students find an intrinsic purpose in the study activity improves learning in various ways and enables higher

performance. The self-determination theory (SDT) of Deci and Ryan (1985, 2000) suggests that satisfying three basic psychological needs is the essential requirement for the construction of intrinsic motivation. These are the need for autonomy, relationship and competence. The new way of conceiving learning goes towards a way of working centered on the learner and away from that educational process derived from the teacher. Enabling students to take part in decision making and sharing tasks and responsibilities with them increases the feeling of autonomy and self-determination. To achieve this, pupils must act responsibly; responsibility can be taught and learned, but teaching must be systematic and continuous (Dyson, 2002). A methodology that, as has been widely said, fosters responsibility among students is precisely the cooperative learning that, associated with the flipped classroom, directs the students to collaboration and teamwork, promotes motivation and encourages students to become autonomous and independent in their studies (Taylor et al., 2014; Liu, Wang, & Ryan, 2016).

The contexts of active learning, be they cooperative or flipped, are considered environments in which effective forms of learning are developed and students report greater satisfaction of basic psychological needs, intrinsic motivation and interest in the subjects studied compared to the peers included in classes with traditional teaching methods, that is, lectures (Hanze & Berger, 2007; Lo & Hew, 2017; Sergisa, Sampsonab, & Pelliccione, 2018). Furthermore, the perception of competence and the feeling of being an active part of a learning community certainly contributes to higher performances (Beachboard, Beachboard, Li, & Adkinson, 2011; Kostaris et al., 2017). The sense of belonging and community integration has in fact been repeatedly confirmed as one of the major predictors of the school career and professional preparation (Abeysekera & Dawson, 2015; Seery, 2015).

In summary, the studies, with some differences, have shown that engaging in active learning activities provides students with the opportunity to experience competence, relationships and autonomy and promotes greater commitment in the students, that is, the willingness to continue studying and showing interest in the proposed activities. Moreover, the confirmation of the link between the satisfaction of the basic psychological needs of competence, relationships and autonomy and scholastic/academic success is confirmed by many. These indications are useful for researchers in the field of motivational theories, active learning and vocational training, as well as for professionals involved in the planning, execution and evaluation of educational-teaching programs. In fact, the studies contribute to broaden the knowledge about the application of the SDT in educational contexts, especially for those involved in teaching as they explain the motivational processes underlying the active learning groups. Consequently, knowing what motivation mechanisms are and identifying the factors that can favor or hinder effective learning can motivate education professionals to engage in this type of teaching activity, despite the challenges and demands of commitment and additional resources that complex learning contexts require.

In summary, educational projects that involve groups of students should be considered an effective approach to improving learning and teaching in schools at all levels, as they improve academic engagement and meet the basic needs of students. A particular attention to the planning phase is necessary because the effectiveness of active learning requires a careful choice of the topics to be treated, which must be stimulating and linked to reality, the creation of networks among the students to guarantee the relationship, the assignment of responsibilities and functional roles to the group, as well as the freedom of self-organization of team processes, as well as a functional use of new technologies, while ensuring that individual students receive adequate support from their classmates and teacher (Bishop & Verleger, 2013; Giannakos, Krogstie, & Chrisochoides, 2014; Lo & Hew, 2017).

Disabled Students and Active Learning Contexts

The studies carried out over the last few years on inclusive school systems and on multi-dimensional inclusion assessment models (Pavone, 2014; Cottini, 2017) have highlighted how the implementation of inclusive education should translate into innovative and effective teaching practices, based on the motivation and self-determination of disabled students and on the design of supportive learning contexts. This goes in the direction of the well-being and the thinkability/construction of a life project that really meets the needs of students, with and without disabilities, to aspire to an independent and

self-determined life. Among the “qualities” that identify a scholastic context as motivating there is precisely the presence of a class with structures and functions, values and norms that enhance students’ abilities, as they optimize development, adaptive behavior, their performance and psychological well-being.

All this makes us open our eyes to the importance of favoring the self-determination of people with disabilities, so that they can feel satisfied with themselves, who they are and what they do, developing and exploiting their resources and improving their quality of life. Unfortunately, as documented by extensive literature, subjects with disabilities are not given the opportunity to make choices and have preferences. It is important, in fact, to keep in mind that every person, regardless of intellectual level and disability, has resources, as well as preferences and prevailing interests, and has the right to achieve what he wants, rather than what others want and expect. Few teachers, although working, in their opinion, in an inclusive manner, believe that the skills and knowledge related to the promotion of self-determination are too complex to be learned by the students, and therefore a priori they do not prepare to offer educational opportunities to manage student diversity and enhance differences nor do they use various devices to transform skills into skills that are useful in life, nor consequently they succeed in outlining clear objectives of learning progression. This is because these teachers are incapable of managing complex learning conditions, which should be oriented to bring out individual characteristics of each in the direction of a full realization of the independent life project.

Assuming the inclusive school, the model of self-determination means, therefore, to set up learning communities that provide opportunities for all students to actively participate in class life, as well as to encourage forms of collaboration between teachers aimed at decoding individual differences and to the choice of diversified strategies to meet the educational needs of the students. It is therefore necessary to think from the perspective of inclusive design, which is self-determined and therefore does not originate from a list of predefined activities and constraints in rigid temporal terms but is receptive, creative and oriented to the expectations of the person and his personal goals. In practice, strategic teaching skills are required to construct alternative curricular paths, where self-determination is configured as a transversal skill to be acquired to achieve deep and self-regulated learning. Working at school on the implementation of self-determination means creating a context of mediation. Learning to use self-determination, learning to be self-determined requires a change of perspective; only the teacher who is convinced that each student can go beyond the state he is in and walks in the direction of developing the potential of the students will find and create the conditions for this to happen. So, what are the hypothetical steps to implement self-determination? how to structure learning environments, how to build effective practices?

If it is true that being self-determined means to perceive causal agents of their own path of change and learning, it is equally true that we need to outline a *modus operandi* to implement proactivity through person-centered planning, pre-knowledge of pupils, and experience as a starting point—on identifying people’s values and their active involvement (Wehmeyer, 1992; Ryan & Deci, 2000). The aim is to help the disabled student to achieve significant life goals based on the resources available, personal interests and individual and social sense of accomplishment.

In this direction, pedagogical models of cooperative and flipped learning can present themselves as valid alternatives to traditional teaching, since they focus on the potential of the learner and not on the quantum of disability and limitations that the pupil in difficulty presents. In fact, the use of collaborative practices and the activation of the flipped classroom responds adequately to the educational needs of all students, through a sort of connective pedagogy that underlines the importance, on the part of the teacher, of using more teaching styles and diversified teaching strategies to involve all students and facilitate their learning (Corbett, 2001). The active learning contexts aim to train independent pupils able to identify problems and solve them in real situations, to use skills and procedures to solve complex problems, to transfer the acquired knowledge in different contexts; capable of problem solving, active participation, collaboration and cooperation, acquisition and transfer of knowledge through a conscious use of new technologies.

As for students with disabilities, the focus becomes the design of the fundamental point on which teachers can reflect to evaluate the success of their students' learning. It is necessary to take into consideration the starting level of the students in relation to the educational objectives to be achieved, the level of difficulty of the tasks, the monitoring of progress and the availability of educational support structures (Morrissey & Semmel, 2001; Stough & Palmer, 2003). In terms of actual teaching, a strategy capable of producing positive results consists in making the children work in small groups and adjusting the difficulties of the task to the students' abilities. To teach complex concepts, the procedures and teaching materials should be clear and explicit, so that everyone can understand, remember and master the contents effectively, rather than deducing from previous experiences or the work of others (Knight, 2002; Paulsen, 2005) and the flipped classroom and cooperative learning certainly lend themselves to this purpose (Vaughn et al., 2000).

Nevertheless, it is further necessary to investigate some aspects that have not yet been studied; in fact, although there has been research investigating the role that certain individual and contextual variables (self-determination, self-efficacy, and class climate) have in the educational context, few studies still investigate these factors in young students with disabilities together with educational aspects and didactics implemented by the teacher (active methodologies), that is, the true barometer of the teachers' competencies, which are substantiated in their ability to face contexts of supportive learning and consequently to evaluate the program.

Aims

The aim of this study is to investigate whether there are differences between students with disabilities and without any pathology, included in active learning contexts, in the level of satisfaction of basic psychological needs, in the perception of skills, in the perception of the classroom climate and in the motivation to learn.

Participants

The group consisted of 100 students (age: $M = 16.99$; $DS = 1.808$) residing in the province of Messina, Italy (44.1%) and in some provinces of Calabria (55.9%). Specifically, it involved 33 students with disabilities and 67 students with typical development, attending the last three years of secondary schools of second degree. In particular, 50% of students attended a high school, 23.5% a technical institute and 26.5% a professional institute. For young people with disabilities, in most cases, they were students with learning disabilities or with slight intellectual deficits. The group of students consisted of 37 males and 31 females. All the students were placed in classes whose teachers frequently applied both the flipped classroom methodology and cooperative learning activities, for implementing the student knowledge and improving the degree of self-determination and motivation to learn in the socio-emotional areas (motivation, self-efficacy and interaction).

MATERIALS AND PROCEDURE

Before proceeding with the completion of the questionnaires, the informed consent was delivered to be signed by the parents (for underage students). Anonymous protocols were prepared and delivered to the students. The participants were met in small groups and the administration, conducted in a single session, engaged them for about 30 minutes.

Each student was asked to complete the following questionnaires:

LCQ — LEARNING CLIMATE QUESTIONNAIRE (Williams and Deci, 1996). This is a questionnaire composed of 15 items aimed at measuring the support for autonomy and competence that the student receives from their teacher. Scores were awarded via a Likert 7-point scale from 1 ("Strongly disagree") to 7 ("Strongly agree").

PCS — PERCEIVED COMPETENCE SCALE (Williams and Deci, 1996). This is a short questionnaire that evaluates the student's perception of their feelings of competence about learning

and engagement in the classroom. The scores were awarded on a Likert 7-point scale from 1 (“Not at all true”) to 7 (“Very true”).

SRQ-A — ACADEMIC SELF-REGULATION QUESTIONNAIRE (Ryan and Connell, 1989). This tool, composed of 32 items, evaluates students’ motivation to study. The scores are expressed on the Likert 4-point scale from 1 (“Not at all true”) to 4 (“Very true”).

BPNS — BASIC PSYCHOLOGICAL NEEDS SCALE (Kasser, Davey, & Ryan, 1992). This is a questionnaire composed of 21 items aimed at measuring basic psychological needs, such as competence, autonomy and relationality, through a 7-point Likert scale from 1 (“Not quite true”) to 7 (“Very true”).

RESULTS AND DISCUSSION

Given the nature of the data, it was decided to proceed with a statistical analysis of non-parametric data. Specifically, the Mann-Whitney test was used to calculate the differences between the groups, while for the correlations the Spearman correlation test was used.

BPNS - Basic Psychological Needs Scale

Table 1 shows the means and standard deviations of the scores obtained in the BPNS questionnaire.

From the differential analysis between subjects with and without disabilities, the subjects with disability perceived less satisfaction of their need for autonomy [$U = 310,000$; $Z = -3.288$; $p = .001$], while they perceived greater relation [$U = 328,500$; $Z = -3.063$; $p = .002$] compared to their typical development peers. However, in terms of competence, both groups considered this basic psychological need largely satisfied (Figure 1).

SRQ-A - Academic Self-Regulation Questionnaire

Table 2 shows means and standard deviations of the scores obtained in the SRQ-A questionnaire.

From the analysis of the data obtained from the SRQ-A, it is clear that subjects with disabilities exhibited a higher external regulation [$U = 408,000$; $Z = -2.083$; $p = .037$] and a greater introjected regulation [$U = 385,000$; $Z = -2.367$; $p = .018$] compared to the group of students without any pathology. This tendency by young people with disabilities—to regulate their behavior (in this case, the study) mainly on the basis of thrusts and stimuli coming from outside—could be the general consequence of the very frequent use of educational and rehabilitative practices, which, on the basis of incentives and reinforcements, pushes them to change their behavior (Figure 2).

PCS - Perceived Competence Scale (LCQ) - Learning Climate Questionnaire

Table 3 shows the means and standard deviations of the scores obtained from the PCS and LCQ questionnaires.

From the analysis of the data obtained from the PCS and the LCQ, no significant differences emerged between the groups of children with and without disabilities in the perception of skills [$U = 486,000$; $Z = -1.137$; $p = .256$]. Furthermore, there seems to have been no difference between the groups in the perception of the class climate, understood in terms of support for autonomy and competence [$U = 500,500$; $Z = -0.945$; $p = .345$] (Figure 3).

CORRELATIONS

The correlations were made for separate groups.

Table 1. Means and Standard deviation of BPNS

Groups	Autonomy	Competence	Relation
students with disability M	33,97	28,51	40,64
DS	7,536	5,782	5,492
typical group M	39,12	30,94	37,5
DS	7,313	6,490	7,664

Figure 1. Psychological need

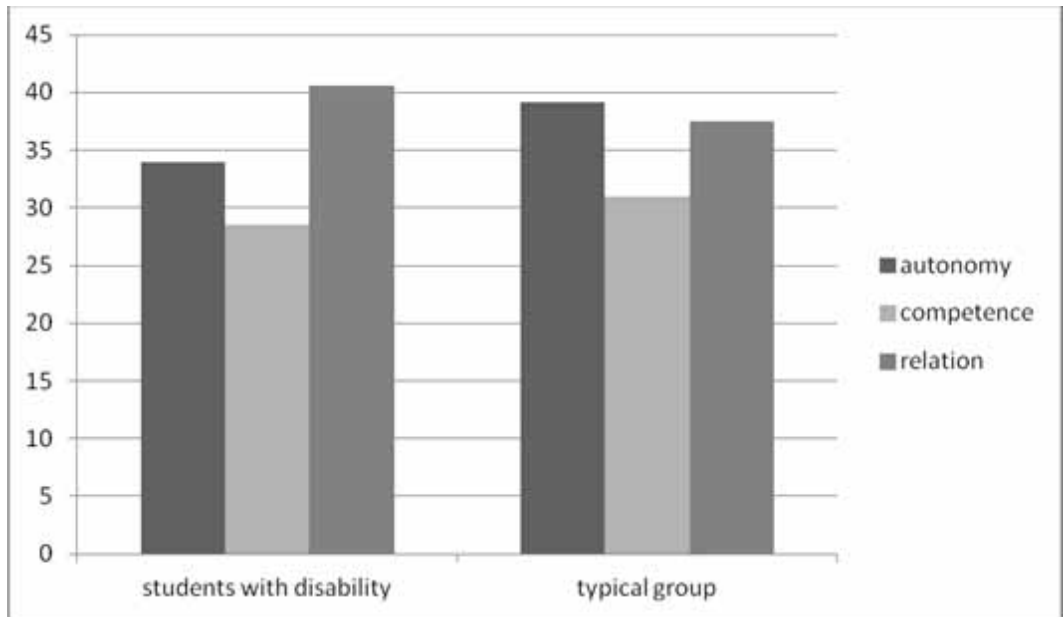


Table 2. Means and Standard deviation of SRQ-A

Groups		External Regulation	Introjected Regulation	Identified Regulation	Intrinsic Motivation
Students with disability	M	26,11	26,63	22,03	17,51
	DS	5.810	6.625	4.866	5.354
Typical group	M	22,85	23,24	21,36	18,06
	DS	6.032	5.562	4.393	4.808

Individual Factors (Basic Psychological Needs and Skills Perception) and Learning Self-Regulation

Regarding the group of students with disabilities, from the correlational analysis between the different factors investigated positive correlations emerged between the perception of skills and the basic psychological needs of autonomy [$r = .405$; $p = .016$], of competence [$r = .357$; $p = .035$] and

Figure 2. Basis of incentives and reinforcements

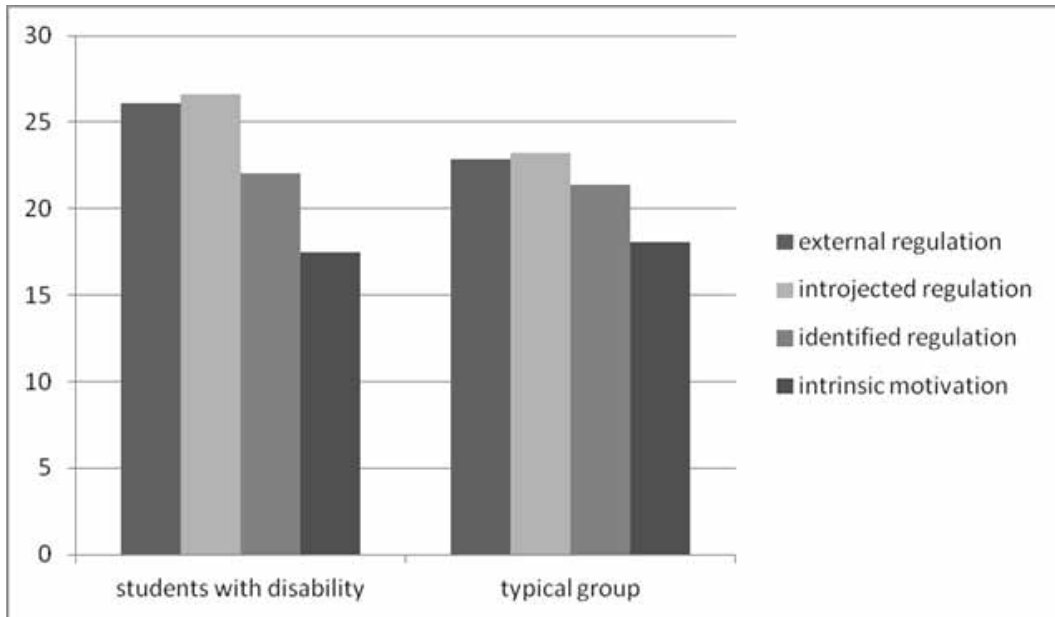


Table 3. Means and Standard deviation of PCS and LCQ

Groups		PCS	LCQ
students with disability	M	21,94	81,40
	DS	5,035	16,781
typical group	M	23,27	77,79
	DS	5,064	16,763

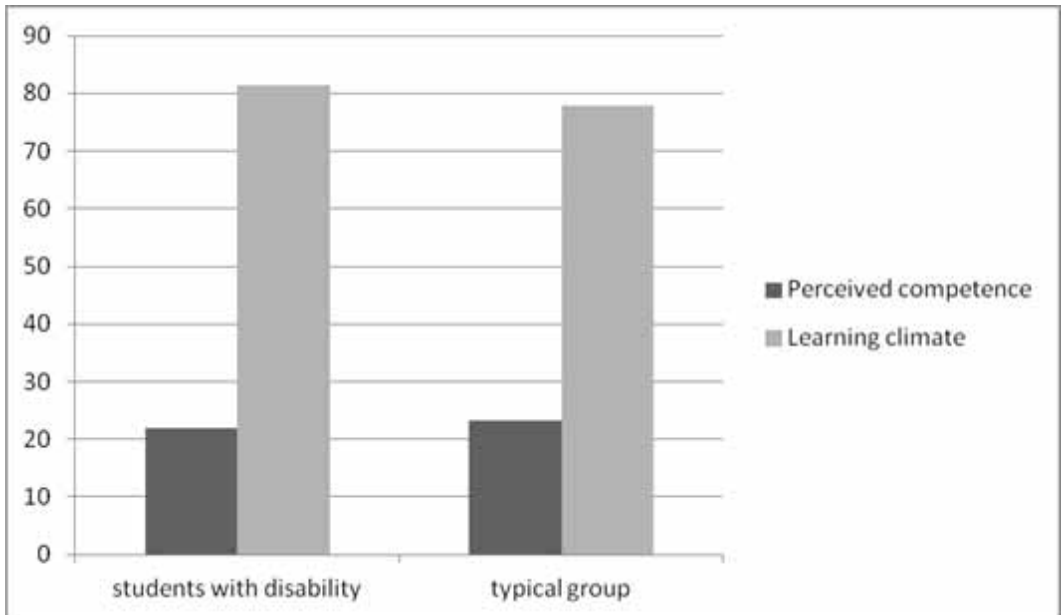
of the relation [$r = .611$; $p = .000$]. These results indicate that the more the subject, regardless of his difficulties, is perceived as adequately competent, the more he satisfies his basic psychological needs (autonomy, competence, and relation), and the more actively he participates in the activities of the class. This probably demonstrates that overturned learning also promotes the students' ability for peer interaction and collaboration. Moreover, the more the student in difficulty feels effectively integrated and in a significant relationship with others, the greater the tendency to regulate one's own learning behavior seems to be intrinsic [$r = .389$; $p = .021$], introjected [$r = .355$; $p = .036$] and identified regulated [$r = .414$; $p = .013$].

As for the typical development students, there is a positive correlation between psychological need for autonomy and intrinsic motivation [$r = .366$; $p = .036$], and between the psychological need of competence and both intrinsic motivation [$r = .509$; $p = .002$] and the identification motivation [$r = .403$; $p = .020$]. Specifically, it seems clear that the students who feel more competent and freer to make their choices are also those who regulate their behavior in a highly self-determined manner.

Contextual Factors (Class Climate) and Learning Self-Regulation

In the group of students with disabilities, the data highlighted significant relationships between contextual factors and motivation to study. Specifically, the perception of the class climate correlates

Figure 3. Perception of class climate and support for autonomy and competence



positively with the introjected regulation [$r = .439$; $p = .008$], the identification regulation [$r = .478$; $p = .004$] and the intrinsic motivation [$r = .520$; $p = .001$] to learn. In practice, the more the student in difficulty perceives greater support and support from the teacher and his companions, the more he will be pushed to approach the study in a more autonomous and self-directed way. Furthermore, this positive attitude towards the study seems to be related to teachers' use of active, more effective educational and teaching strategies, indispensable for linking the subject with a disability and adequately supporting his learning process.

Finally, in reference to the students with typical development, significant correlations were found between the perception of the class climate and the introjected regulation [$r = .596$; $p = .000$], the identification regulation [$r = .597$; $p = .000$] and the intrinsic motivation [$r = .503$; $p = .003$]. In particular, the student who feels he belongs to a welcoming and supportive class group tends to show an attitude towards the most self-determined study. Furthermore, even for these subjects, there seems to be a positive relationship between the active teaching strategies used by the teachers and the degree of self-determination in the study.

In general, from the results of the analyses conducted above, a partial satisfaction of basic psychological needs emerges, above all in students with difficulties. This data, as claimed by Deci and Ryan (1985; 2000), may partially explain their high tendency to use external thrusts in their approach to the study, although inadequate levels of intrinsic motivation characterized both groups of students examined. It is also true that the predisposition to an approach to study conditioned by external contingencies, more present in subjects with disabilities, could be prompted by the habit of using, in rehabilitation practices and in the daily management of disability, mainly approaches based on reinforcements and external incentives, which are considered more effective and immediate. In addition, the data confirm, in addition to the impact of individual factors in the motivation to study (psychological needs and perception of skills), a significant relationship also emerged with the classroom climate, with the teaching strategies of active learning and functional and self-determined levels of motivation to study.

Further confirmation of what has been said, numerous studies conducted in different fields (education, sport, work, development, etc.) have shown that the satisfaction of basic psychological needs promotes positive outcomes in the development of the person regardless of their disability (Sheldon et al., 2001). As widely demonstrated, poorly supportive contexts seem to counter the satisfaction of such needs by making students with disabilities at risk of feeling excluded and poorly motivated; in fact, manipulative and limiting educational practices tend to preclude above all the need for autonomy and self-regulation of students.

In light of the above, and based on the results obtained from our survey, the individual factors (psychological and self-efficacy needs) and contextual factors (classroom climate and active teaching methods) seem to have an impact on the learning motivation of the students, conditioning, in fact, their self-realization and self-determination in the study. Therefore, the frustration of needs seems to negatively influence the development and growth of the individual as a free and voluntary agent of his own actions and choices. Consequently, supporting autonomy means for teachers to promote the ability of their students to make decisions, solve problems, make choices independently and behave in a self-determined manner, their behaviors being motivated not by expectations and external rewards but as the direct consequence of an autonomous and conscious choice. And this would further confirm how much the flipped classroom and cooperative learning would offer further help to pupils and teachers, especially in solving complex problems. It is probable, in fact, that the use of adequate and functional teaching strategies will result in teachers improving their sense of self-efficacy, reducing the level of personal stress caused by the management of the pupils, especially when these students have special educational needs.

It seems more and more appropriate, therefore, to think of engaging political and economic resources in the design of preventive interventions aimed at involving teachers in training activities that offer, in addition to psycho-pedagogical support, where necessary, the ability to acquire skills, skills, and resources that favor a more adequate educational-didactic management of the class. These interventions should aim to implement the teacher's skills and to restructure class relationships through mainly educational and training interventions aimed at achieving increasingly high levels of functioning.

Although our survey has provided interesting results on the issues investigated, however, it has some limitations that do not allow the results obtained to generalize without qualification to other contexts and populations. Specifically, this is a preliminary investigation aimed at exploring the individual and contextual conditions present in learning settings in which active methodologies are used. Future research could include the identification of a more representative sample and the structuring of a more sophisticated research plan that allows pre- and post-analysis with the control group, which would allow greater control of the variables examined and would allow the researcher to specify, with greater accuracy, the nature of the relationship that emerges among the factors investigated.

Finally, the results obtained confirm the need to pay greater attention to the educational processes and to the evolutionary dynamics of children, with and without disability. They also suggest the opportunity to design and implement preventive and supportive interventions, which, by reducing stressful conditions and providing teachers with adequate teaching skills, create favorable conditions for the psychosocial well-being of the class and self-determination of students. In fact, there is no doubt that adaptability and self-regulation strategies are skills that are acquired within development contexts and, from a systemic point of view, the class certainly represents a fundamental development context.

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