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Capability Approach in VET as a Strategy to Reduce Dropout: The "Job High-School" Case in Italy

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Abstract

Taking into account the accelerated process of technological innovation and the recent Covid crisis, the non-cognitive skills have been recognized as an essential element in the learning process today. Cometa VET school implements a 2-years VET training program called "Job High-School", aiming at former dropout students' employability, but carefully fostering their social and emotional skills. A capability approach has been developed in order to foster a human integral development. This research, funded by Fondazione SanZeno, presents the main elements of this approach and its theoretical foundations. A statistical analysis, based on data collected through 4 waves of surveys between 2018 and 2020, highlights the impact of the approach in terms of increase of emotional and productive as the Key Performance Indicators (KPIs) on a group of students attending the program during 2018-2020. Emerging results show the relevance of tutors in the VET system as key players in learners' personal development.

Keywords

capabilities, agency theory, early-school leavers, skills, dropout

1 From employability to a holistic approach in VET

The current paradigm shift the global society is experiencing shows an increasing number of major challenges: uneven industrial and post-industrial development, poverty, population growth, pollution and degradation, equity and gender disqualify. These challenges are structural aspects that directly affect the social mobility of individuals with more vulnerable incomes and social conditions, which predetermine their learning and entry into the labour market in the absence of equal opportunities (Tikly & Barrett, 2011; Hanushek et al., 2017; Kis & Windisch, 2018).



Education and training require to put skills at the centre stage to prepare young people to live an “unknown future” (Mulder, 2016), where the risks of automation in more sensitive sectors are also added to the destruction of jobs, as also aimed by Sustainable Development Goals (SDG4). While professional skills, although their relevance, can become outdated due to the continuous changes, growth mindset and a life-long learning attitude become paramount.

The relevance of skills, then, cannot be restricted to the technical and professional ones; the impact of non-cognitive skills is positively correlated to both professional and personal development (Heckman et al., 2014; Nussbaum, 2011). As emerged in Gendron (2018), developing emotional capital, besides academic and professional skills, is crucial to empower people and to promote a real VET fullness.

In a broader sense, education (and training) should aim at the learners’ personal empowerment of their agency, not only to increase their level of employability, rather to develop their growth mindset and to reduce any potential risk of future social exclusion due to economic but also cultural and psychological reasons (Nussbaum, 2011). As in the capability approach theory by Sen (Drèze & Sen, 2002), agency empowerment concerns a wide range of a person’s capabilities, due to the multidimensionality of human development. Capabilities include personal and social assets, professional and foundational skills, as well as several other dimensions: human, social, psychological even “trascendent”, as in Schnyder et al. (2019). The recent Covid crisis has accelerated a process of rethinking education, underlining the relevance of social-emotional learning and life skills in a newly defined set of values in current school system (curriculum, didactics, learning ecosystems).

2 The scientific debate on emotional capital in VET

As a starting point, the VET system is currently positioned and distinguished with great importance in the international community as a method capable of linking learning processes in the workplace and the classroom (Alet & Bonnal, 2012). Graduates can be linked to the labour market with adequate competencies, skills and experience, as they are learned, tested, evaluated and empirically improved during their formation phase (Domadenik et al., 2013; Eichhorst et al., 2015). Given this logic of institutional set-up, it has been distinguished as an effective strategy for both developed and developing countries to address a variety of structural challenges affecting social mobility today, such as low economic growth, skill mismatches between labour supply and demand, inequality increase and low social mobility, among others (Biavaschi et al., 2012; OECD, 2017a).

Specifically, this system is distinguished as an inclusive offer for population strata with different socio-demographic contexts, but also for those individuals who, for different reasons, do not have the same opportunities to access traditional education and who subsequently find it difficult to obtain well-paid employment (Haveman & Smeeding, 2006; Tikly & Barret, 2011; Heckman & Mosso, 2014).

On the other hand, the challenges that afflict the VET system are clear, where one of the most highlighted is the disdain and signalling that certain sectors of traditional academia and society itself generate concerning technical and technological education (Drolet, 2005; Levine & Sutherland, 2013; Billett, 2014; Rose, 2014; Abrassart & Wolter, 2020). However, several studies demonstrate the positive effects of the VET system applied to various contexts and student profiles (Alet & Bonnal, 2012; Domadenik et al., 2013; Eichhorst et al., 2015).

Taking into account the accelerated process of technological innovation (inherent in the current global economic structure), the non-cognitive skills have been recognized as an essential element in the learning process today, as they are decisive for the efficient performance of a professional career (Watts & Watts, 2009; Lippman et al. 2015; Acemoglu & Restrepo, 2018). Empirical studies indicate that interpersonal skills are particular abilities that can play a role in improving an individual's job performance and career prospects; hence, employers consider

these competencies (Abdullah-Al-Mamun, 2012; Majid et al., 2012; OECD, 2017b). New approaches to the VET system propose to contemplate not only the development of professional techniques but also the construction and strengthening of soft skills (Gendron, 2018). The development of non-cognitive skills in students allows them to enhance their training in the workplace with higher determination and interaction, giving them the confidence to work in a collaborative environment. In this sense, educators or tutors have an important role in preparing their pupils to be competitive in a highly changing and complex economic world by focusing on the development of emotional skills (Gendron, 2004; Nussbaum, 2011; OECD, 2017a).

Considering that students, regardless of their social background, receiving adequate instruction and an efficient process of emotional development, can overcome certain barriers that put their performance in the workplace at risk as their career. To integrate social and emotional development into students' academic instruction, different classifications have been proposed to refer to various skills linked to such emotional cognitive processes: as is the case of skills and competencies; attitudes, beliefs and mentalities; and character and values (Jones and Kahn, 2017); as well as cognitive, emotional, social and interpersonal skills and competencies (ASPEN, 2019).

In addition to social and emotional development, the investigations of Gendron (2004; 2018) and Gendron et al. (2016) consider that emotional capital is key to enhancing the skills of individuals in the VET system, as well as in their transition to the labour market. The emotional capital is defined as an intangible asset that makes possible the promotion and enhancement of technical knowledge, social skills such as cultural background, since these are endemic elements in the process of developing capacities (Gendron, 2004; Schnyder et al., 2019). Moreover, it is important to consider that under the focus of the development of emotional capital, the objective of the training process is not only that the graduate enters his or her first job, or that the future worker generates a high rate of return measured by the company's profits (Nussbaum, 2008). Hereby the main objective is that the student achieves emotional, technical and collaborative development so that he can reduce social exclusion or face obstacles to enter the labour market (Drèze & Sen, 2002; Nussbaum, 2011; Ticky & Barrett, 2011; Duarte, 2016)

Furthermore, education has been one of the sectors that have suffered the most from the shocks of the Covid-19 crisis, interrupting the learning processes, and afflicting the motivation of students. Facing this crucial situation, the VET system has also tried to adapt its distance learning process where the role of the tutor has been more central in conducting learning to the student (Ozer, 2020; OECD, 2020). On the other hand, the Covid-19 pandemic has accelerated a process of rethinking education, emphasizing the relevance of socio-emotional learning and life skills in a set of values defined in the contemporary school system (curriculum, didactics, learning ecosystems, as in Burgess & Sievertsen, 2020). In this context, the VET system requires a set of strategies to protect learning processes in both their technical and emotional spheres in a context where social distance has become an imperative and the apparent new normality. The role of tutors, as developed in the Cometa case here presented, will hence be essential to ensure the transfer of appropriate knowledge and skills to students in a labour market that demands a high level of competence and efficiency.

3 Cometa VET centre: mission, method and target

Due to a quite unique origin, Cometa VET school (Como, Italy) has always been developing its educational approach of Inclusive Excellence (Nardi et al., 2018), providing the students with high-quality professional skills, but carefully fostering their social and emotional skills. The main aim of this approach, designed for former early school leavers or kids at risk of social exclusion, has always been their integral human development.

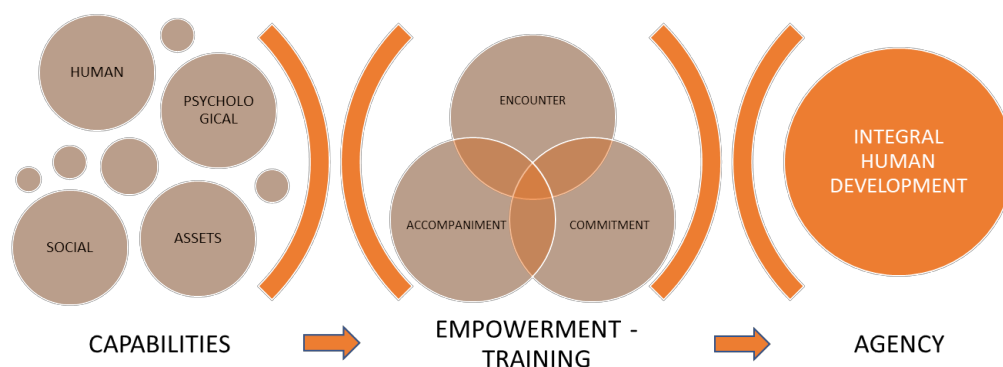
In particular for the early school leavers, the school has specifically developed a 2-years work-based training, called Liceo del Lavoro (LdL, Job High-School), providing the

participants with an EQF3 certificate and a smoother transition to the job market. The specific target of this program, early school leavers, may have experienced problems in counselling and in the choice of their secondary level school after primary. Most of them show learning disabilities, often not officially recognized, or complex familiar background which have affected their motivation, self-esteem, self-efficacy. A strong support is required, even psychological, to recover from school failures as well as to re-discover their own potential capabilities. They are usually 16-19 years old and:

- Did not complete first or second year in any secondary level school;
- Did change school once or more times during the secondary level;
- Did get an EQF2 education but their school history shows more than one failure;
- Did attend but did not complete a high school program due to emerging difficulties.

Besides the lack of professional skills, this target, more importantly, shows a need to foster motivation and soft skills to build self-awareness. A synthetic overview of this approach is shown in Figure 1.

Figure 1
Cometa Capability approach model



Note. Authors' elaboration based on Schnyder et al. (2019).

Pursuing integral human development, for a complete agency, requires a deep empowerment of existing capabilities, which Cometa realizes through a model of intervention which can be described in 3 steps:

- Encounter
- Commitment
- Accompaniment

3.1 Encounter

The first step of the method is defined as “encounter” (Schnyder et al., 2019), to underline the expected significance of the moment for both the learner and the school staff, rather than a simple “interview”. This very first moment involves the Educational Coordinator of Cometa, in charge of the supervision of the different tutors and their plans personalized on every single learner. Beyond the collection of basic information, this dialogue aims at discovering the reasons affecting the school pathway and causing the decision to drop out. Furthermore, it is an

important moment to let the learners raise their own intrinsic motivation to start a new pathway, more importantly to detect extrinsic motivation including an obligation by parents.

3.2 Commitment and educational pact

The second step consists of activating the personal responsibility of the learners. During a second meeting with the Educational Coordinator and the tutor, the learner is invited to become a protagonist of the educational pathway, accepting an active role in the different proposed training and educational initiatives, including their rules. An educational pact is formally signed as a symbolic beginning of learner's commitment to this journey. The educational pact may include the family, if they represent a concrete support to the learner rather than an obstacle or, even, one of the problems causing their previous failures.

3.3 Accompaniment: tutoring and training

Tutoring is an essential function during training. The tutor plays a crucial role in defining the personalized pathway of each learner, including not only professional skills but also human development and soft skills. The basic method is the personalization: it consists of the definition of a flexible pathway for every learner, based on character, needs, capabilities and learning styles, in order to make them succeed in their program. Every educational project has to be continuously re-adapted according to the reaction of the learner. Tutor's activity includes many non-formal moments: dialogues, socio-emotional support, in order to help the learner in building a self-trust beyond professional goals.

In the Cometa capability approach, the tutor represents the main actor for a successful support to learners. Every tutor is in charge of approximately 30-40 learners, although in the case of LdL, they are usually no more than 20. Their activity is organized in 3 main areas:

- Educational care;
- Mediation among school, family, trainers, companies and learner;
- Supervision of the internship.

Tutor's activities are conducted mainly autonomously, however the weekly, or fortnightly, moments of coordination and supervision with the Educational Coordinator and the other tutors represent a distinctive element of Cometa approach.

Tutors support learners during their training. Training in Cometa is based on the reality-based learning process (Mele & Nardi, 2018; Bengo et al., 2018), an innovative learning approach adopted for all the different groups of learners but designed mainly for the LdL students. LdL learners are then involved in a real job experience in one of the 3 workshops-enterprises (called "bottega"), namely the Bottega del gusto (Taste), including a bar, a restaurant and a pastry shop open to the public. During the entire learning process skills are transmitted to the students. These abilities are divided into two big sections: (a) professional/ technical competences and (b) basic skills, such as abilities referring to the administration of the product and the process (languages, history, public speaking, etc.), and promotional skills (mathematics, science, economy, etc.). Soft skills are needed in every single moment during the learning process.

4 The empirical analysis

The survey used in this research is an original novel contribution developed by the Cometa institution applied to the tutors and students of the LdL. From this proposal, the intention is to offer a method capable to monitor the students' emotional performance during a two-year vocational training program from the tutors' perspective. Additionally, part of the main goal of

using an empirical perspective is to test the theoretical approach of capabilities of the institution reflected on the students results. From this perspective, based on the statistical results it will provide relevant information about the personalized monitoring of the students' learning process, focusing not only on technical or intellectual knowledge but also on their emotional performance.

This survey collects the perception of tutors and students in the classroom (as well as in professional practices) for following the development of skills and the emotional impact of the institution's treatment in the two years of training. The information captured is decomposed in four different waves from 2018-2020, where the questionnaire was applied during the beginning of the first semester and after the first year of formation, and at the beginning of the third semester and the end of the final year of training.

The opinions of the tutors described in this research were based on their perception of the performance of 15 LdL students aged 16-19. Anonymous survey was used to give specific attention to the students during the learning process. Under this logic the tutors were able to follow the pupils' performance and based on the results of the different waves of the survey, they were able to focus on a particular extra task to foster the emotional skills of the students.

Driven by the continuous development of emotional skills, from the information collected in the survey, tutors used the information reported by students and colleagues to understand the attitudes expressed and their performance, obtaining a better picture of the learning process and also allowing feedback with the student.

In this study, only the results obtained from the four waves of the tutors' survey were taken into account. Six specific questions were included in this survey that allowed the 15 students to be followed continuously from one semester to the next. In this sense, the tutors answered in a percentage scale from 0 to 100 about the evaluation of the students' skills performance in 6 different items of professional competences: a) time management; b) activity planning; c) autonomy; d) level of motivation; e) self-control and f) recognition of emotions. Questions include:

1. How do you evaluate the student's ability to manage working time?
2. How do you evaluate the student's ability to plan activities?
3. How do you evaluate the student's ability to perform a task independently?
4. Regarding school activities, how do you evaluate the student's motivation?
5. How do you evaluate the student's ability to self-control?
6. How do you evaluate the student's ability to recognize their emotions?

Using the six points identified in the questionnaire, this study offers the possibility of creating two groups of competencies focused on productivity and the development of social-emotional skills. In further research, both indices will be subjected to an exploratory factorial analysis (principal component method) consisting of questions 1-3 for the case of the productive index and items 4-6 for the socio-emotional index (Jolliffe, 2002).

With the statistical information obtained, it will allow us to select, group, and verify the students' competences from an empirical approach under a time horizon. Besides using the preliminary results obtained from the survey, it will be possible to make certain inferences about the impact of the training process year after year, as well as the implications for the implementation of improvements in the application of the institute's approach.

5 Emerging results

As mentioned in the previous section, the survey used has information about tutors and pupils. It is essential to state that Cometa follows the idea that not only the academic progress is

important, but also the social and psychological improvements. Taking this into account, Table 1 shows the average perceptions of the tutors respected to the students that belong to the program.

Table 1

The average tutors' perception

Period	Year 1		Year 2	
	t0	t1	t0	t1
Statistic	Mean	Mean	Mean	Mean
	(1)	(2)	(3)	(4)
How do you evaluate the student's ability to manage working time?	47.0	61.2	65.5	70.8
How do you evaluate the student's ability to plan activities?	41.7	61.2	65.0	72.3
How do you evaluate the student's ability to perform a task independently?	45.7	61.5	63.5	75.0
Regarding school activities, how do you evaluate the student's motivation?	44.0	60.8	64.0	72.2
How do you evaluate the student's ability to self-control?	36.0	60.2	55.5	69.0
How do you evaluate the student's ability to recognize their emotions?	39.3	58.8	56.5	68.4

Legend. The scale of the answers goes from 0 to 100.

As mentioned, the survey has four waves of time. The first column shows the results of "Year 1" for the first period (t0); the second column presents the information for the "Year 1" second period (t1). The columns 2 and 3 show the results for the "Year 2" first and second periods (t0 and t1, respectively). The findings of Table 1 show an increase in the average of the tutor's perceptions from t0 to t1 for Year 1. The same results are found in the case of Year 2.

Table 2 suggests a significant improvement for all the items for the four waves. For instance, in the question: "how do you evaluate the student's ability to manage working time?" the average answer of the tutors were 47 for the first period of year 1, but in the second period of the same year, there is an improvement of the tutor's perception (61.2). For year 2, it is also an improvement in the perception of tutors. The mean increased from 65.5 to 70.8 (for period t0 and t1 of Year 2). The rest of the items follows the same patterns.

Table 2
The hypothesis of the tutors' perception

	Hypothesis	Test of mean difference for the four waves		Test of mean difference for the two waves of Year 1		Test of mean difference for the two waves of Year 2	
		Test		Test		Test	
		H (1)	p (2)	H (3)	p (4)	H (5)	p (6)
How do you evaluate the student's ability to manage working time?		42.055	0.008	7.545	0.018	5.749	0.043
How do you evaluate the student's ability to plan activities?		33.784	0.014	15.625	0.002	8.963	0.017
How do you evaluate the student's ability to perform a task independently?		21.288	0.040	12.479	0.004	12.030	0.008
Regarding school activities, how do you evaluate the student's motivation?		13.877	0.091	9.804	0.009	3.556	0.096
How do you evaluate the student's ability to self-control?		11.329	0.129	20.151	0.001	8.176	0.021
How do you evaluate the student's ability to recognize their emotions?		59.793	0.003	16.260	0.002	18.831	0.002

Legend. ** The scale of the answers goes from 0 to 100. H – Hottelling Test.

To verify if the mentioned improvements are significant, we applied the "Hotelling" test. The first null hypothesis assumes that the means for the four periods are the same (see columns 1 and 2). As we can see in Table 2, the null hypothesis is rejected, suggesting that the improvement is statistically significant (except in two items, "Regarding school activities, how do you evaluate the student's motivation?" and "How do you evaluate the student's ability to self-control?").

Then, we proceed to test if the improvement of the items is significant within the periods of each year. The null hypothesis is if the mean of period t0 is the same as the mean of period t1 for year1, the same for the second year. The results are shown in columns 3 and 4 for year 1. As can be seen, the results suggest that the improvement in the tutors' perceptions from the period (t0) to period (t1) is significant for Year 1. In the case of Year 2 (columns 5 and 6), only one item is not significant "Regarding school activities, how do you evaluate the student's motivation?" but the rests of the items follow the same results as year 1.

In conclusion, the items that capture the tutors' perception in terms of social and psychological skills have improved during the time that students have attended the institute. Only one case, "Regarding school activities, how do you evaluate the student's motivation?", the improvement of tutors' perception is not significant (for the four waves of periods and for year 2). This analysis was also developed for the case of the student's perception. However, we did not find a conclusive result, although they show similar trends. In other words, the average of the perception of the students has increased, but the improvement is not significant. It might be because of a lack of understanding of the questions of the students¹.

6 Conclusions, policy implications and future research

This research offers an overview on a current project aiming at exploring the role and the impact of tutoring activities on the development of professional, social and emotional skills in a

¹ It is a limitation of the study. However, we will work in this shortcoming for future research.

specific target group of former dropout learners. Cometa VET school has implemented tutoring since its beginning in order to activate learners' agency through skills empowerment: tutors play a quite innovative role, which combines several existing ones, including teaching assistant, coach, counsellor, pastore care.

The analysis conducted on a sample of learners attending an ad hoc 2-years program for dropouts (called Liceo del Lavoro, LdL) shows a statistically significant impact of tutoring service on learners' emotional and productive skills. Surveys have been collected in 4 different waves, the first one at the beginning of the program (September 2018) and the last one before graduation (June 2020); they have been addressed to tutors and learners. The surveys by the side on tutors confirm positive results, nevertheless we find a bias on the student's perception reported probably because of a misunderstanding of the questions related with the answers reported (overestimating the positive results), in this sense the current paper discusses and present only results on tutors' survey.

Bearing in mind that this article focuses only on the study of the tutor's perception of the students' results and does not take into account the student's perception and the grades obtained, this obviously opens up different questions regarding the validation of the answers presented in this paper. However, recognizing these limitations, the results presented allow to approach in a specific way the role of the tutor in a learning system that links the development of the social-emotional skills, since it is the tutor himself the competent entity that allows to identify this process of emotional development in an intertemporal way beyond the grades obtained at the end of the course or the own evaluation of the student.

The results presented are a starting point for the study of the development of social-emotional skills and their reflection in technical skills, as well as their impact on labour insertion. In this article, despite the possible biases in terms of the qualification estimated by the teachers on the students, in subsequent works, we will seek to complement it with statistical evidence taking into account the grades obtained from the students, the evaluation of within the learning process in the workplace or company, to expose results linked to the reflection of the VET system in the labour market. By the other hand, it is worth noting how students' perception appears slightly decreasing in the last months, mainly due to the Covid emergency and its impact, also psychological.

The next steps of the research will focus on analysing existing correlations between students' and tutors' answers to similar items; the trends across the time-window will be also taken into account. After collecting information on learners' placement after graduation, the research will also identify potential clusters of items, in order to highlight indexes which may be relevant not only for the scientific debate but also for educational implications.

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