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The decision to act: A study on the variables influencing teachers' willingness to implement inclusive classroom practices

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Abstract

The aim of this thesis was to investigate the variables that impinge on teachers' decisions to implement inclusive classroom practices. A thorough literature review on this research topic led to the identification of the Theory of Planned Behaviour (TPB) (Ajzen, 1988) as an underpinning framework for this thesis. This theory has gained considerable approval in social sciences to investigate human behaviour and an increasing amount of studies on this area of educational research have adopted it as a guiding theory and model for the research design and implementation.

On the basis of the TPB and similar studies conducted, the principal research hypothesis included three predictor variables and a dependent variable. The former are teachers' self-percepts of efficacy to work in inclusive contexts, attitudes towards, and concerns about inclusion, whereas the dependent variable is intentions to implement inclusive classroom practices. It was hypothesised that the more positive the teachers' attitudes towards inclusion are and the higher the self-percepts of efficacy, the more likely teachers are to adopt inclusive practices. With regards to the third predictor variable, the fewer the concerns the higher are teachers' intentions to implement inclusive practices. Moreover, it was hypothesised that studied together, these three variables would be more predictive of intentions than when taken singularly.

Four scales comprised the questionnaire that aimed at measuring these variables. These were the Teacher self-efficacy for Inclusive Practices Scale (Sharma, Loreman & Forlin, 2011), the Attitudes towards Inclusion Scale (Sharma & Jacobs, 2016), the Concerns about Inclusive Education Scale (Sharma & Desai, 2002), and the Intentions to Teach in Inclusive Classrooms Scale (Sharma & Jacobs, 2016). An additional section collected demographic data, while two concluding open-ended questions asked respondents to identify factors that, in their opinion, facilitate and hinder inclusion.

The questionnaire was administered at the beginning of a course which was aimed at student-teachers interested in acquiring the Learning Support Teachers Warrant to work in either nursery and primary school or lower and upper secondary school. The total number of respondents was 156 of whom the majority were female (93%) and were between 31 and 40 years old (64%). Mean scores showed that this group of respondents have positive

attitudes, low levels of concerns, high levels of teacher self-efficacy, and high degrees of intentions to teach in inclusive classrooms. Multiple regression analysis confirmed the main hypothesis in this thesis that the three variables together are significant predictors to explain intentions to teach in inclusive classrooms.

According to the respondents, the major factor that fosters inclusive education is the implementation of *active, hands-on teaching strategies and activities*, whereas *values, beliefs and attitudes that are not conducive for the promotion of inclusive contexts* were considered as the main hindrance.

This thesis argues that the TPB can guide studies on the relationships between the variables impacting on inclusion, and may be useful for designing teacher education programmes and evaluate their effectiveness. However, the integration of qualitative studies to reduce the vulnerability of data collected from self-reports is required.

Keywords: Attitudes, Concerns, Intentions, Teacher self-efficacy, Theory of Planned Behaviour

Dedication

to all the '**TEACHERS**'

who have shaped who I am today

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List of Abbreviations

	GENERAL
CCE	Commissione delle Comunità Europee
CPD	Continuous Professional Development
CSIE	Centre for Studies on Inclusive Education
EACEA	Education, Audiovisual and Culture Executive Agency
EADSNE	European Agency for the Development of Special Needs Education
EC	European Commission
ECTS	European Credit Transfer and Accumulation System
EFA	Education for All
EP	European Parliament
EU	European Union
GTE	General Teacher self-efficacy
IEA	International Association for the Evaluation of Educational Achievement
IMBP	Integrative Model for Behavioural Prediction
ITE	Initial Teacher Education
ITP	Initial Teacher Preparation
LST	Learning Support Teacher
MIUR	Ministero dell'Istruzione, dell'Università e della Ricerca
MLPS	Ministero del Lavoro e delle Politiche Sociali
OECD	Organisation for Economic Development
OJEU	Official Journal of the European Union
PBC	Perceived Behavioural Control
PIRLS	Progress in International Reading Literacy Study
PISA	Program for International Student Assessment
PTE	Personal Teacher self-efficacy
RQ	Research Question
SCT	Social Cognitive Theory
SEN	Special Educational Needs
SLD	Specific Learning Difficulties

TALIS	Teaching and Learning International Survey
TE4I	Teacher Education for Inclusion
TIMSS	Trends in International Mathematics and Science Study
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WHO	World Health Organisation

SCALES AND SUBSCALES

AIS	Attitudes towards Inclusion Scale
ATMS	Attitude Towards Mainstreaming Scale
CIES	Concerns about Inclusive Education Scale
EC	Efficacy in Collaboration
EII	Efficacy in Inclusive Instruction
EMB	Efficacy in Managing Behaviour
ITICS	Intentions to Teach in Inclusive Classrooms Scale
SACIE-R	Sentiments, Attitudes, and Concerns towards Inclusive Education–Revised Scale
TEIP	Teacher self-efficacy to Implement Inclusive Practices Scale
TSES	Teacher Self-Efficacy Scale

Rationale

"Teaching in 21st-century classrooms presents a number of challenges to teachers due to the pressures associated with increasing student achievement while balancing the complexities that arise out of a changing composition of students. Requirements associated with teaching have reached a point where even veteran teachers may begin to question their ability to engage students or implement the instructional strategies necessary to meet the needs of all the students within their classrooms."

(Putman, 2012, p. 26)

Dealing with the pressures of 21st-century classrooms while trying to ensure that all students, irrespective of their ability, reach their maximum potential is no easy feat. Schools have become a complex and dynamic setting in which intricately-intertwined exogenous and endogenous factors are at play. At the heart of this complex adaptive system there are the teachers without whose constant dedication, hard work and motivation no policy, programme or strategy can take shape. Indeed, teachers are the human vehicle, the catalysts, who give life to structural, organisational and resource provisions.

Since the early 90s, following the *World Conference on Education For All* held in Jomtein, Thailand, educational policy became a priority for all sectors. Social, health and economic policies perceived education as a turnkey solution to ensure future stability and continuous growth. However, a radical reform of the system was called for to be able to address present and future challenges brought about by globalisation, modernisation and a knowledge-based economy in an unpredictable environment in constant evolution. Within the same decade lobby movements advocating for human and social rights pushed for global commitment to guarantee equal opportunities throughout all spheres of life. This scenario gave rise to much debate on and major reforms in three main areas of educational policy: the creation of an education system that is founded on a social rights-based model that includes all students irrespective of their needs, abilities or disabilities, the identification of competencies necessary to face complexity; and the training of teachers to be able to work in inclusive environments and facilitate student competency acquisition.

This thesis focuses on the latter facet and is aimed at providing insight on the variables influencing teachers' willingness to implement inclusive classroom practices. This focus is based on the premise that as much as knowledge and skills are fundamental for practice, they are not sufficient to bring about the desired behaviour. Reflections and studies ranging from philosophical perspectives to cognitive neuroscience have postulated that a number of variables and mechanisms are involved when individuals take the decision to act out their intentions.

In order to better understand and be able to critically analyse this research topic, the first step was to conduct a thorough literature search on four main aspects:

- the contextual background and the challenges teachers are faced with in today's classrooms (Chapter 1);
- theories and models that could underpin the search for such variables and their levels of influence on behaviour (Chapter 2);
- the theories, methods and tools used to conduct similar studies; and
- the results obtained and the conclusions that were reached from these studies (both outlined in Chapter 3).

As a result, the research focus was narrowed to three main factors impinging on teachers' behaviour and their willingness to implement inclusive practices: the teachers' attitudes towards inclusion, their concerns about inclusive education, and their self-percepts of efficacy in implementing inclusive practices. The underpinning framework guiding this research was the Theory of Planned Behaviour (TPB) (Ajzen, 1988) according to which these three variables are predictive of intentions, and as a consequence also behaviour. As outlined in Chapter 2, this hypothesis is sustained, albeit with some differences and further insightful perspectives, by theories also stemming from psychological research as well as sociological studies and cognitive neuroscience. The common denominator of the theories outlined is the concept of agency rooted within an ecological perspective that takes into account multiple levels of influence.

Therefore, the study model guiding the research included three predictor variables: *teachers' self-percepts of efficacy to work in inclusive contexts, attitudes towards,* and

concerns about inclusion, and a dependent variable which is the *intentions to implement inclusive classroom practices*. On the basis of the TPB, it was hypothesised that the more positive the teachers' attitudes towards inclusion are and the higher the self-percepts of efficacy, the likelier teachers are to adopt inclusive practices. As regards concerns, the fewer these are, the higher are teachers' intentions to implement inclusive practices. Moreover, it was hypothesised that studied together, these three variables would be more predictive of intentions than when taken singularly. This formed the basis for the development of the research questions which were:

- RQ1: What are the respondents' attitudes, intentions, concerns, and self-percepts of efficacy towards inclusion and inclusive classroom practices?

- RQ2: What are the relationships between the variables of interest?

- RQ3: Which of the three variables can best predict intentions?

- RQ4: Do the three variables together better predict intention?

- RQ5: Are there any differences in the way nursery and primary school teachers scored on the four scales when compared to teachers teaching in lower and upper secondary schools?

- RQ6: Is teaching experience influential on the way the respondents answered in the four scales?

- RQ7: Which are the main factors that teachers feel may promote or hinder inclusive practices?

The tool used was a questionnaire which included four scales identified in literature as apt to measure these variables. These were the Teacher self-Efficacy for Inclusive Practices Scale (Sharma, Loreman & Forlin, 2011), the Attitudes towards Inclusion Scale (Sharma & Jacobs, 2016), the Concerns about Inclusive Education Scale (Sharma & Desai, 2002), and the Intentions to Teach in Inclusive Classrooms Scale (Sharma & Jacobs, 2016). An additional section collected demographic data, while two concluding open-ended questions asked respondents to identify factors that, in their opinion, facilitated and hindered inclusion. This tool was administered to a group of 156 student-teachers who were attending a professional development course to acquire the Learning Support Teachers' Warrant. Chapter 4 presents the demographic data and the results.

In summary, mean scores showed that this group of student-teachers have very positive attitudes, high levels of teacher self-efficacy and high degrees of intention to teach in inclusive classrooms. Multiple regression analysis confirmed the main hypothesis in this thesis that these two variables, together with lower levels of concerns are significant predictors to explain intentions to teach in inclusive classrooms. With regards to concerns the CIES scale and the final open-ended question confirmed that the student-teachers are primarily concerned about the lack of infrastructure, organisation and resources. On a personal level, the main worries are their own knowledge and skills. However, the major obstacle for the success of inclusive practices was reported to be *values, beliefs and attitudes that are not conducive for the promotion of inclusive contexts*. On the other hand, the main factor that fosters inclusive education is the implementation of active, hands-on teaching strategies and activities.

These results led to the conclusion that the TPB may well guide studies on the relationships between the variables impacting on inclusion. It could also be useful in the designing phases of teacher education programmes and to evaluate their effectiveness.

However, studies need to integrate qualitative methods to reduce the vulnerability of data collected from self-reports, as well as to provide a deeper insight on what factors influence the teachers' decisions to act. At the same time, environmental contexts and knowledge and skills should be given their due attention both in research and in teacher education programmes, these being reported among the main concerns within this group of student-teachers as well as in an array of other studies conducted both in Italy and elsewhere. In other words, teachers do not only need will, but rather be '*ready, willing and able*'.

1. Introduction

1.1 Rethinking Education for 21st Century Classrooms

Today's schools have become a highly complex and dynamic environment challenged by globalisation, modernisation and a fast-paced economy. The pervasive influence of modern information and communication technologies, the evolving family models, immigration and the concerning re-emergence of poverty are only some of the salient factors that have led to such a challenging reality. Against this backdrop of an unpredictable environment in constant evolution (Sibilio, 2014; Morin, 1999; Fowler & van der Walt, 2004, Michel, 2001) and the obsolescence of knowledge and skills within knowledge-based economies, the priority of rethinking educational policy and practice has reached new heights.

Within the context of internationally-set agendas, one of the most influential documents in steering educational reform toward the contemporary system was the *World Declaration on Education for All and the Framework for Action to Meet Basic Learning Needs*, adopted by the World Conference on Education for All (EFA) in Jomtein, Thailand (United Nations Educational, Scientific and Cultural Organisation [UNESCO], 1990). Delegates from 155 countries as well as representatives from around 150 governmental and non-governmental organisations, committed themselves to make primary education accessible to all children and to massively reduce illiteracy by the year 2000. The slogan 'Education for All' became a mission in educational research, policy and practice, as this reaffirmed the notion of education as a fundamental human right.

The components shaping the vision to meet the basic learning needs of all by the year 2000 were:

- universalising access to learning and promoting equity;
- focussing on learning to define acceptable learning outcomes and systems of assessing achievement;
- broadening the means and scope of basic education;
- enhancing the environment for learning;
- strengthening partnerships (UNESCO, 1990).

However, the pressure for change was not only from the educational field. It could be said that the aim of 'Education for All' was extended to the idea of 'Education for All in All Policies' as investment in education was considered a key strategy to ensure economic and social sustainability for the 21st century. In an era when leading economies were still at their peak, a significant number of initiatives took place in the attempt to reach these ambitious goals in time for the World Conference to be held in Dakar in the year 2000. Other political, social and cultural factors, both on national and global levels, naturally impacted the actions that took place at the time, leading to heated debate and major reform on three main facets of education. These were:

1. the creation of inclusive environments that would provide universal access to learning in an equitable manner;
2. the identification of competencies to define the learning outcomes necessary and broaden the means and scope of basic education accordingly;
3. the adequate preparation of teachers to acquire the necessary expertise to allow all children, irrespective of ability, to reach their fullest potential.

The following sections summarise the key milestones that have shaped current educational agendas, policy and practice for each of these three facets. The aim is that of illustrating the complex backdrop teachers are faced with today and what the policy expectations in terms of student attainment and professional practice are. Although presented separately and in a chronological manner, the developments and decisions in one area, naturally influenced the others and vice versa. In addition, the economic

fluctuations, political unrest, scientific and technological advances, and educational research taken place over the past 25 years have also been obstacles or provided an impetus to bring about the desired change.

1.2 Inclusive Education

1.2.1 Inclusion in education as a human right

Even if the Jomtein documents didn't make explicit reference to inclusive education, the vision of "universalising access and promoting equity" (UNESCO, 1990, p. 4), the commitment to "ensure equal access to education to every category of disabled persons" (UNESCO, 1990, p. 5) and the reference made to underserved groups and gender within the same Article (Article 3), can be considered as statements sustaining an inclusive approach.

The Salamanca conference is, however, considered to be the cornerstone of the developments that followed. Organised by UNESCO and the government of Spain, 94 senior government representatives, as well as representatives of many non-governmental organisations attended the event (UNESCO, 1994). It was especially significant since it helped in:

- putting pressure on governments to include children with difficulties and learning disabilities within EFA;
- providing a forum where ideas and experiences could be exchanged;
- creating awareness regarding the right to education of children with learning difficulties and disabilities;
- clarifying the philosophy and practice of inclusion (Mittler, 2000).

Indeed, the *Salamanca Statement* and *Framework for Action on Special Needs Education* (UNESCO, 1994), provided future directions for special needs education on principles, policy, and practice levels with the aim of providing education for all within the regular education system.

Pivotal to education reform were the affirmation and belief that:

1. all children are unique and that their interests, abilities and learning needs vary;
2. children with special educational needs (SEN) must have access to regular schools and hence educational systems needed to be reformed;
3. programmes should be redesigned to take into account the children's diversity;
4. a child-centred pedagogy needs to be adopted to meet children's needs;
5. inclusive education is the

> "most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all; moreover, they provide an effective education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system" (UNESCO, 1994, p. 3).

As outlined above, the Statement placed emphasis on the importance of a wider reform of education needed to improve its quality and relevance and promote higher levels of learning achievement by all learners, thus placing educational reform firmly within a broader social agenda that included health, social welfare and vocational training and employment. It emphasised that mechanisms for planning, monitoring and evaluating provision for inclusive education should be "decentralised and participatory" and should encourage the "participation of parents, communities and organisations of people with disabilities in the planning and decision making" (UNESCO, 1994, p. ix). Further, the guidelines provided recommendations also regarding recruitment and training of educational personnel, external support services, community perspectives and resource requirements.

The World Summit on Social Development in Copenhagen followed a year later in 1995. Considered to be one of the largest gatherings of world leaders at the time, a new consensus on the need to put people at the centre of development was reached. Lobby movements advocating for the rights of disabled persons insisted that the triple

commitment to the eradication of poverty, unemployment and marginalisation were priorities for disabled people and that their interests were to be given prominent attention in Summit resolutions (Mittler, 2000). Among the commitments, the report included the following: "Ensure equal educational opportunities at all levels for children, youth and adults with disabilities, in integrated settings, taking full account of individual differences and situations" (United Nations [UN], 1996, p.16).

At the turn of the 21st century, during the World Education Forum held in Dakar, Senegal, the EFA goals and targets established in 1990 to be reached by the year 2000 were reaffirmed and extended to 2015. If many of the EFA goals hadn't been reached, however, the *Dakar Framework for Action, Education for All: Meeting Our Collective Commitments* (UNESCO, 2000), provides evidence that a lot had been done to put inclusive education firmly on the agenda of educational reform. In fact, inclusion was not only concerned with the abolishment of special schools and the integration of students with a disability in mainstream schools. Inclusive principles regarded ethnic and linguistic minorities, remote rural dwellers and nomads, children, young people and adults affected by conflict, hunger and poor health, among others. The goal for educational environments was that they were to be "safe, healthy, inclusive and equitably resourced […] conducive to excellence in learning, with clearly defined levels of achievement for all" (p. 20).

Another major milestone was the international human rights treaty *Convention on the Rights of Persons with Disabilities* adopted by the United Nations General Assembly in December 2006. To date it has 160 signatories and has been ratified by 172 countries, including the European Union (EU). With regards to education, Article 24 of the Convention stated that persons with disabilities were to be granted the provision of inclusive education systems at all levels, regardless of age, without discrimination and on the basis of equal opportunity. Appropriate measures to guarantee inclusion were also envisaged. Commas 3 and 4 of Article 24 stated that:

> "3. States Parties shall enable persons with disabilities to learn
> life and social development skills to facilitate their full and equal

participation in education and as members of the community. To this end, States Parties shall take appropriate measures, including:

(*a*) Facilitating the learning of Braille, alternative script, augmentative and alternative modes, means and formats of communication and orientation and mobility skills, and facilitating peer support and mentoring;

(*b*) Facilitating the learning of sign language and the promotion of the linguistic identity of the deaf community;

(*c*) Ensuring that the education of persons, and in particular children, who are blind, deaf or deafblind, is delivered in the most appropriate languages and modes and means of communication for the individual, and in environments which maximize academic and social development.

4. In order to help ensure the realisation of this right, States Parties shall take appropriate measures to employ teachers, including teachers with disabilities, who are qualified in sign language and/or Braille, and to train professionals and staff who work at all levels of education. Such training shall incorporate disability awareness and the use of appropriate augmentative and alternative modes, means and formats of communication, educational techniques and materials to support persons with disabilities" (UN, 2006, p. 17).

The UNESCO International Conference on Education, *Inclusive Education: The Way of the Future*, on the one hand can be considered as the concluding phase in the historical development of inclusive education as it is generally understood today and, on the other hand, as the cornerstone for the future of inclusive education. The reference document published in 2008 highlighted the milestones throughout the previous 20 years, provided clear distinctions between special needs education, integration and inclusion, and proposed inclusion as a guiding principle for all educational policies and practices (UNESCO, 2008).

1.2.2 Inclusion in education as a priority for social and economic growth

The philosophy, principles and values of inclusive education and its implementation have also, most rightfully, made their way into documents regarding economic and social policies. The document *Transforming Our World: The 2030 Agenda for Sustainable Development* (UN, 2015), called for integrated solutions to be able to eradicate all forms of poverty, combat inequalities between and within countries, preserve the planet, stimulate sustainable economic growth and foster social inclusion. The document, which reaffirmed the millennium development goals for the year 2000 and established another 17 to be reached by the year 2030, affirmed that one of the key strategies was ensuring "inclusive and equitable quality education and promote lifelong learning opportunities for all" (UN, 2015, p. 14).

Similar aims can be traced in various international, European and local documents related to economic, and social policies (Commissione delle Comunità Europee [CCE], 2005, 2006; European Commission [EC], 2010; European Parliament [EP], 2000; Ministero del Lavoro e delle Politiche Sociali [MLPS], 2003; Organisation for Economic Development [OECD], 2005b, 2015) that have considered quality education for all as one of the indispensable prerogatives to guarantee the right of every citizen to lead a happy, healthy and productive life on an individual and community level (OECD, 2005b; UN, 2015; World Health Organisation [WHO], 1986).

1.2.3 The history of inclusive education in Italy

Looking more closely at the national scenario, as highlighted earlier, these milestones have all heavily impinged on the educational reforms adopted in Italy since the 90s. However, in Italy the shift from a dual track to the current single track system was a gradual process whose inception dates back to the early 70s. Before then, a bio-medical model prevailed and students with disabilities, sensory deficits and learning difficulties were taught in special schools usually run by private entities, ecclesiastical organisations or municipalities. However, the convergence of social, cultural, scientific,

ethical and political instances contributed to the gradual, yet irreversible, decline of special schools (Pavone, 2014). Law n.118 in 1971 could be considered as the turning point of a gradual succession of developments that placed Italy at the forefront in the establishment and provision of inclusive education (D'Alessio, 2011a; de Anna, 2014) and was credited for its radical and ambitious endeavour (Mittler, 2000). In the following 6 years the vast majority of students were transferred from special schools to mainstream schools and classrooms. This included all students irrespective of their disability, with the exception of those presenting intellectual deficits or physical impairments that are so serious that impede or render learning or their placement in mainstream schools difficult (art. 18 comma 2, Law 118/1971). No criteria were made available at the time, which led to many of the more serious cases being included from an early stage (Abbring & Meijer, 1994).

Law 517 of 1977 was inspired by the recommendations put forward by Minister Falcucci's Commission in 1975. The presence of pedagogists aided in providing an educational stance to juridical aspects that not only regarded a new organisational model, but more so the establishment of a school ethos that aimed at promoting the success of each and every student (Aiello, 2015). This law placed emphasis on the importance of having individualised educational plans for students with disability and stated that the teaching methods and assessment processes be adequately chosen to promote student integration and quality education for all. With this law the Learning Support Teacher was also introduced. This was well ahead of time compared to other countries, but what was particularly innovative and in line with inclusive principles was the role ascribed to this professional. Learning Support Teachers, in fact, were to cooperate with and support the teacher in the day-to-day activities rather than assisting the disabled child.

Yet, it wasn't until the 90s that integration of students in mainstream schools was firmly endorsed. The inter-ministerial legislative framework, Law 104 of 1992, placed focus on the integration of citizens of all ages within all aspects of life – education, housing, services and employment. For the first time there was a shift in emphasis from the individual deficit to the context in which people lived, "anticipat[ing] the notion of

disability as something that should be reduced by removing environmental factors (sections 1, 5, 13, and 14)" (D'Alessio, 2011b, p. 10).

This law which is still in force, has ensured the necessary assistance to students and their families to be able to participate fully in the community and also in mainstream schooling. Some examples include free transport services and reduced working hours for parents of children with a disability. Apart from this practical aspect, this law has provided a much needed stepping stone for the successive laws as it generated public awareness on the issue, encouraged debate and research on the best way forward (Chiappetta Cajola & Ciraci, 2013).

Following the "Convention on the Rights of Persons with Disability" (UN, 2006) a succession of laws and guidelines that fully embraced an inclusive perspective were promulgated. Law 18 dated 3rd March 2009 ratified the Convention and instituted a national observatory whose role, among others, was to promote research that could contribute to the identification of priority areas towards which address actions and interventions to promote the rights of persons with a disability. This provided opportunities for scholars in the field of education to rethink school culture, policy and practice (Aiello, 2015).

Law 170/2010, the guidelines released a year later (Ministero dell'Istruzione, dell'Università e della Ricerca [MIUR], 2011b) and the successive Ministerial Directive of 2012 (MIUR, 2012b) laid the final stepping stones to shift from a model based on the integration of students with disability to full inclusion where all students are to be considered as unique irrespective of ability. Law 170 of 2010 and the guidelines released in 2011 outline the provisions and recommend teaching strategies, tools, resources and measures that can be used to promote and facilitate their learning among students certified with Specific Learning Difficulties (SLD) (dyslexia, dysgraphia, dyscalculia and dysorthography). Meanwhile, the Ministerial Directive of 2012 outlines the intervention tools aimed at students with SEN and the territorial organisation for school inclusion. Moreover, it provides a clear definition of who these students with SEN are, specifically outlining that such needs could be temporary or permanent. Thus,

all students irrespective of ability may manifest special needs and the reasons could be due to physical, biological, physiological, but also psychological and socio-economic factors.

Such reforms have favoured the eradication of the dichotomous view – students with disability/students without disability – and together with the Ministerial Circular N.8 dated 6th March, 2013 provide the current legal framework and the guidelines for teachers, schools and teacher education institutions to adopt and implement inclusive practices in classrooms. For those students certified with a disability, an individualised educational plan is drawn with the collaboration of a number of professionals, teachers and families. In cases where students have a SLD or a SEN, a personalised teaching plan is designed.

Statistics on school population regarding the percentage of students with a disability provide evidence of this cultural and legislative evolution. In the scholastic year 2014/15 the number of disabled students was 234,788 students or 2.7% of the total student population in state and non-state schools (MIUR, 2015b) and only less than 1% of students with a disability did not attend mainstream schools (European Agency for Development in Special Needs Education [EADSNE], 2012). As regards the teaching staff, generalist (in primary school) and/or subject (in primary and secondary school) teachers and learning support teachers (LSTs) share classrooms and co-teach. However, the provision of an LST is only envisaged in cases where students with a certified disability are present. Hence, in cases where students with SLD or SEN form part of the classroom, the mainstream teacher does not have such assistance and support (Aiello, Corona & Sibilio, 2014). Further detail on teacher training and professional development will be described later in this chapter.

1.2.4 Defining inclusive education

Since Salamanca multiple meanings and interpretations have been attributed to the terms inclusion, inclusive education, inclusive contexts and inclusive instruction and their adoption process, implementation and evidence of success are still matter of

contention even in the field of educational research (Aiello et al., 2014; Armstrong, Armstrong & Spandagou, 2010; D'Alessio, 2011a; D'Alessio, Medeghini, Vadalà & Bocci, 2015; de Anna, 2014; EADSNE, 2010; Hodkinson, 2011; Norwich, 2013). Notwithstanding this, a number of key elements do emerge.

Firstly, an inclusive perspective is based on a social rights-based model (UNESCO, 2008). Prominent advocates of inclusive education argue that the increasingly rights-based arguments are "a central component in policy-making that has provided the impetus to place inclusion firmly on the agenda of social change" (Daniels and Garner, 1999, p. 3).

Secondly, it is a "shared enterprise" (Booth, 2011, p.6) which addresses system-wide development. All stakeholders need to be engaged to mobilise opinion, build consensus, carry out needs assessments, reform legislation and support local interventions.

Thirdly, inclusion is a process not a state. As Darlington (2003) outlines in his definition, inclusion is "not a simple concept restricted to issues of placement" (p.2). It has significant implications as it calls for a radical shift in attitudes and a willingness on the part of schools – especially teachers – to transform practices in the curriculum on offer, the assessment, recording and reporting of pupils' achievements, the decisions that are taken on the grouping of pupils within schools or classrooms, pedagogy and classroom practice, sport and leisure and recreational opportunities (Booth, 2011; Mittler, 2000, UNESCO, 2008).

Finally, inclusion does *not focus on children with SEN*. "Inclusion means enabling all students to participate fully in the life and work of mainstream settings, whatever their needs" (Centre for Studies on Inclusive Education [CSIE], 2004, p. 1). Hence, definitions of 'inclusion' and 'inclusive education' have moved away from a specific focus on disability towards a broader view that encompasses students from minority ethnic or linguistic groups, from economically disadvantaged homes, or who are simply frequently absent or at risk of exclusion.

Inclusive education therefore has come to mean the provision of a framework that celebrates diversity, demands entitlement and equal opportunities, calls for collective responsibility and meets individual needs. It is a rights-based education system model within which *all* children – irrespective of their ability, gender, language, socio-economic status, ethnic or cultural origin – can be valued equally, treated with respect and provided with meaningful experiences within a lifelong learning perspective. Table 1.1, below, provides an outline of the main elements that distinguish inclusion from the previous model of integration.

Table 1.1: Integration vs Inclusion - A paradigm shift (adapted from Rieser, 2001, p.139)

Integration	Inclusion
Medical Model	**Social** Model
It is a **state**	It is a **process**
The child is **faulty**	The child is an **asset**
The child's **deficits** are diagnosed	**Strengths** and **needs** are defined by self and others
Tends to emphasise the **needs of disabled people**	Tends to emphasise the **rights of all students**
Decision makers are professional, specialist expertise and support is formal	Support is informal and the expertise include mainstream teachers, parents and children
The focus is on changing disabled people	The focus is on changing the schools and the community
Labelling, leading to learned helplessness	Identify barriers and **develop solutions**, leading to **assertiveness**
Solutions to **overcome impairment** are sought	Outcome-based programmes are designed
Ordinary needs are **put on hold**	Ordinary needs are **nurtured**
Emphasis is on curriculum delivery	Emphasis is on curriculum content
Resources are specific and for the benefit of disabled children	Resources are beneficial to everyone
Re-entry if 'normal' enough	Diversity is **welcomed**
Society remains unchanged	Society **evolves**

This broader view encompasses the realities of 21st century classrooms even in countries where dual track systems still prevail: migrant students, children from broken families or economically deprived areas, students who are frequently absent due to illness or are at risk of marginalisation by peers as well as those whose special need requirement may be transient. The focus is not on measuring the distance of the students' disability or deficit from a pre-set standard but on identifying their personal and environmental predisposing, enabling and reinforcing factors (WHO 2001, 2007) that would facilitate learning within a frame of mind that acknowledges their educational potential.

1.2.4.1 Inclusive instruction

Research on teaching in inclusive contexts focuses on finding the most efficacious and sustainable teaching strategies and tools that can facilitate the teaching-learning process in a highly heterogenic classroom. Studies in this field mostly concentrate on the following interwoven areas of intervention (Ianes, 2005; Booth, 2011; EADSNE, 2012; Chiapetta Caiola & Ciraci, 2013; Laneve, 2014):

- Setting a global rights-based curriculum (Booth, 2011) aimed at providing the basis for creating an inclusive school culture which captures common global concerns and encourages lifelong self-directed learning;

- Valuing teacher professionalism and their role in the planning and development of adequate teaching-learning process. The main research strands focus on the identification of the knowledge, attitudes, values, beliefs, skills and competencies teachers require to be more effective in their teaching. Examples include teachers as reflective practitioners (Schön, 1984; Ghaye, 2011; EADSNE, 2012), variables such as sentiments, attitudes, concerns and teacher self-efficacy in inclusive practices (Forlin, Earle, Loreman & Sharma, 2011).

- Creating an inclusive climate characterised by "a strong sense of belonging by its members, positive interdependence between the teachers and the students founded on shared values and rules, and an expression of reciprocal valorisation" (Laneve, 2014, p. 119; my translation). Students need to feel free to explore, experiment, make mistakes and learn in a collaborative and

cooperative environment. The effectiveness of teaching methods explored include peer tutoring (Gordon, 2005), co-teaching (Lodato Wilson & Blednick, 2011) and the various forms of group work activities (Cohen & Lotan, 2014), among others.

- Adopting learning models that take into account the students' cognitive and learning styles and hence envisage differentiated and personalised instruction. Besides the strategies mentioned in the previous two points, studies are also conducted on the identification or design of efficacious and feasible resources, strategies and tools that could enhance learning. Examples vary from the use of mind maps (Corona, 2015), to guiding teaching through simplex approaches (Sibilio, Aiello & Corona, 2013; Sibilio, 2014; Pace, Aiello, Piscopo & Sibilio, 2015; Zollo & Sibilio, 2016), and capitalising technology (Di Tore, 2016; Rivoltella, 2015). The research area of ICTs does not only refer to hardware and software specifically designed for educational purposes such as the smart board or audio textbooks, but it reaches out to other fields of research and innovation in a transdisciplinary manner (Sibilio, 2014).

- Choosing assessment practices that take into account the teaching strategies and resources outlined above. Inclusive student assessment focuses on process rather than outcomes and is aimed at highlighting abilities and skills rather than deficits. Methods chosen encourage self-evaluation, peer evaluation and are a communication tool between teachers and students for constructive criticism and personal and academic growth. One of the most commonly used tools is the portfolio (EADSNE, 2007), which provides a collection of the students' best works throughout their school year.

In conclusion, it is important to point out that a significant indicator as to whether a school is really including students is in the language used. Helping children to 'fit in', to 'overcome their problems' and providing learning support assistants for individual pupils placed under the disability spotlight are all signs of a policy based on integration rather than inclusion. On the other hand, in inclusive settings, adaptations and services aim at supporting the success and wellbeing of all children by ensuring that children's assets are maximised. Learning support assistants are present to support teachers in the

day-to-day running where diversity is a celebration and Individualised Education Plans focus on adapting and improving classrooms, schools and communities (British Psychological Association, 2002).

1.3 The Progression towards a Competency-Based Curriculum

By the 90s, the notion of competency had made its way into basic and general education, shifting the focus from knowledge attainment to abilities, aptitudes, capabilities, capacities, competencies, know-how and skills. It is widely acknowledged that such terms are often associated with different meanings depending on the context (Gordon et al., 2009) and the translation of official documents create further ambiguity between words like 'literacy' when preceded by adjectives such as digital or health, 'skills' and 'competence' – often all translated into Italian with the word *competenza*. There is also much debate on the difference within the same language as is the case in English with the words competence and competency; some scholars affirming that they have a different meaning, whereas according to both the Collins and Oxford online dictionaries, the words can be used interchangeably.

For the purpose of this study the word 'competency' will be used mainly because many of the official documents to which reference will be made, use this rather than competence. However, to avoid any misunderstanding, the following definition has been adopted as the guiding interpretation of the term: a competency is one's ability to handle a task or a group of tasks, by setting in motion and orchestrating one's own internal, cognitive, affective and motivational resources, and utilises the external resources available in a coherent and profitable manner (Pellerey, 2004). This definition encapsulates both subject-specific and transversal competencies for which an additional distinction needs to be made. Whereas the former, as the adjective implies, relate to knowledge and skills pertaining to a specific discipline, transversal competencies are all-encompassing regardless of one's specialisation and concentrate more on learning than teaching.

Literature on the shifting process from knowledge-based learning and assessment to competency-based core curricula provides evidence that the need to answer the question *what skills do young adults who have reached compulsory school age need to be able to play a constructive role as a citizen?* was already felt in the 60s and 70s and it's still at the centre of educational theoretical reflections until today. As a side note before delving further into the argument, one cannot resist pointing out that great philosophers and inspiring pedagogists of all time, ranging from Plato and Aristotle to Rousseau, Montessori, Dewey and Freire, had already anticipated many of the core principles that will be outlined in the next sections. Examples include active and informed citizenship, care of one's wellbeing, education for and throughout life and critical thought and dialogue as opposed to a banking model of education. These and other prominent figures must have definitely inspired the documents presented in more recent years and can be considered 'the soul' of the present and the future of education.

1.3.1 Transversal competencies for a globalised world

The period around the Jomtein Conference was characterised by numerous initiatives and a wealth of philosophical reflections on education. As previously outlined, all had a common goal: that of determining which key transversal competencies were indispensable for future generations to be able to thrive and lead a productive life. Driven by the same mission but having distinct roles and mandates, the UNESCO and the OECD were the two leading international organisations who responded to the challenge. The documents released reflected their different perspectives and agendas: on the one hand UNESCO's utopian vision of a just society and "a better world to live in" (Delors, et al., 1996, p. 19) and on the other hand the OECD's response to an increasing demand for output-oriented and comparative statistical information about education systems in member states (Salganik, Rychen, Moser & Konstant, 1999). Whereas the UNESCO advocated for an education that nurtured an inclusive-led *homo socialis* "blurring the dividing line between winners and losers, between leaders and followers" (Carneiro, 2015, p. 102), the OECD pushed for an education that produced competition-led *homo economicus* by setting minimum levels of cross-curricular competencies and

designing instruments to be able to measure them. Nevertheless, as will be outlined, a number of converging points still emerged.

1.3.1.1 The UNESCO Faure and Delors reports

The International Commission on Education for the 21st century, which was set up by UNESCO and was chaired by Jacques Delors, released the report *Learning: the treasure within* (Delors et al., 1996). As argued by Elfert (2015) in his article aimed at comparing and contrasting this report to the document *Learning to be* (Faure et al., 1972), also known as the Faure Report published 24 years earlier, the two bore many similarities. In spite of the different social, economic and political contexts, both reports reflected "on the future of education by questioning the validity of the existing systems not only of education, but of society as a whole […] [and argued that] the concept of lifelong learning had a political dimension in terms of the emancipatory claim for justice and equality, which have been driving forces of the enlightenment and modernity" (Elfert, 2015, p. 88).

Starting from the Faure report, this concentrated on the development of the person as a whole. It suggested reflection on the process which would help the individual form as a "complete man" become an "agent of development and change", "citizen of the world" and "author of his own fulfilment" (Faure et al., 1972, p. 158). It postulated that for human beings to be able to "understand the structures of the world they have to live in" (p. 151) and "where necessary [show] a personal commitment in the struggle to reform them" (p. 151), education had to promote reflection and "political consciousness" (p.151). More importantly, as Elfert (2015) pointed out, the report criticised the "'linear expansion' of education systems and recommended a 'move from the quantitative to the qualitative, from imitation and reproduction to a search for innovations, from a uniform procedure to diverse alternatives'" (Faure *et al*., 1972, pp. 173–174 in Elfert, 2015, p. 89), thus challenging formal education and putting non formal and informal education in the spotlight for lifelong education. The Delors Report, proposed four pillars of education. These were:

1. *learning to be*, which reflected the ideals and principles of the Faure Report – that of becoming an empowered self-fulfilled person;

2. *learning to know*, which referred to the metacognitive competence of learning to learn and the role of education to instil in future generations the pleasure of learning throughout life. It was based on the premise that due to the incessant scientific and technological progress, individuals need to have the necessary competencies to keep pace with innovation;

3. *learning to do* focused on the ability to transfer knowledge into practice. It proposed bridging "knowledge and skills, learning and competences, inert and active knowledge, codified and tacit knowledge, and the psychology and the sociology of learning" (Carneiro, 2015, p. 105). The report suggested apprenticeship schemes and stages so as to combine formal learning with professional experience;

4. *learning to live together* epitomised the importance of identity construction with the aim of favouring understanding and tolerance towards diversity, creating cohesion and a culture of peace.

Finally, Elfert (2015) points out a very subtle, yet fundamental difference between the two reports on the terms used with regards to lifelong education. Whereas the Faure report used this term, the Delors report used the term learning throughout life. Citing an interview with Roberto Carneiro, Elfert (2015) reported that the use of this term, rather than lifelong learning was to highlight that beyond the temporal or vertical dimension of lifelong learning, learning throughout life embraces the horizontal notion of lifewide learning. Here again, the importance to non-formal and informal education was emphasised since learning is one's life experiences and reflections. It is a continuum which is not limited to age or a period of one's life. Within this perspective, education has to be flexible to respond to economic demands and has to be available to all learners. As Carneiro (2015) postulated "[l]earning throughout life, then, is both a way of organising education and a philosophy of education; taking education certainly not as a preparation for life, but a human predicament embedded with life itself […]" (p. 106).

In summary, one can affirm that both the reports promoted a social-rights based inclusive model, as inclusive education is understood today. The ultimate goal is that of preparing individuals for a life of liberty and of interdependencies. It suggested concepts such as knowing oneself and one's own culture in order to be able to value diversity, instilling the desire for learning throughout life, having the basic skills to be able to face unpredictable situations and the ability to exercise good judgment combined with independence and a stronger sense of personal responsibility for the attainment of common goals (Delors et al., 1996, p. 22-24). As Carneiro (2015) postulated "the emphasis on *learning* is heralded as one of the most significant paradigm changes, that which characterises a *biological society*, in opposition to the paradigm of *teaching*, which dominated the *mechanistic ideal* of a rote, repetitive, industrial society" (p. 105, italics in original). Figure 1.1 presents the six distinct dimensions identified by Carneiro (2001) and translated in Carneiro (2015) which are closely linked to the four pillars, forming a web of 24 intersections that comprise multiple challenges to contemporary education and learning.

1. To learn the human condition in its infinite dignity and richness, but also in its mysterious contingency and vulnerability.
2. To learn a modern citizenship, celebrating diversity and appreciating democracy, empowering members of a community, entitled to rights and obligations.
3. To learn our culture of origin in the fullness of its ingredients: memory, language, civilisation, history, philosophy and dialogue with the world.
4. To learn how to process information and organise knowledge, that is to say, how to deal with the information society and the abundance of oracles in a context of lifelong learning.
5. To learn to develop a vocational identity in the different aspects related to the productive system, ranging from the continuous acquisition of skills to sustainable employability.
6. To learn to nurture wisdom, through a well-balanced combination of codified and tacit — active — knowledge, bearing in mind the need of a conscious evolution and of procuring meaning-making constructs, that are enclosed in the gift of life and in the cosmic dimension of existence.

Figure 1.1: The six distinct dimensions of learning (Carneiro, 2015, p. 105)

1.3.1.2 The OECD initiatives and its influence on the education agenda

In 1987 the Organisation launched the Indicators of National Education Systems (INES) project which led to the branching out and the successive development of a series of initiatives. Those targeting school-aged populations included the Cross-Curricular Competencies (CCC) Project, the Program for International Student Assessment (PISA) and the Definition and Selection of Competencies: Theoretical and Conceptual Foundations (DeSeCo) project. The principal aim that provided the grounding for all projects was that of conceptualising and designing measures of learning outcomes able to provide comparable statistical information for all ages across the globe (Rychen et al., 1999).

The goal of the CCC project was that of establishing the minimum level of competencies necessary to provide future generations with a well-equipped survival kit. Similarly to the six dimensions of learning proposed within the four pillars of the Delors report, the areas requiring attention were "orientation in the political, social, and economic world, problem solving capacity in everyday and critical key situations, communication skills, degree of autonomy (measured through self-perception), and [...] perception of critical human values (e.g., prejudice versus tolerance, solidarity, etc)" (Rychen et al., 1999, pp. 13-14). A study to explore the feasibility of the development of comparable indicators through the use of existing instruments was conducted between 1993 and 1996. The domains retained were Politics, Economics and Civics, Problem Solving, Self-Perception/Self-Concept, and Communication. The choice of the areas was dictated by the availability of instruments while the referential age of the targeted population was lowered to 16 due to technical and practical reasons.

The PISA survey was launched in 1997 to monitor the levels of knowledge and skills acquired by students nearing the end of compulsory schooling. The survey is conducted every three years and in 2015 seventy-two countries and economies participated. Approximately 540,000 students representing about 29 million 15-year-olds, were assessed in science (which was this year's focus), mathematics, reading, collaborative

problem solving and financial literacy in a two-hour test . This and similar surveys such as Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS)[1] are said to be shaping education reform as countries learn from each other's successes and are sustained by evidence to promote change in assessment methods, teacher education, curriculum design and so on (Rychen & Salganik, 2001; Rychen et al., 1999).

The DeSeCo project, which was launched and chaired by the Swiss Federal Statistical Office and supported by the U.S. National Centre for Education Statistics, sought to develop a theoretically-grounded guiding framework to "guide the longer-term extension of assessments into new competency domains" (OECD, 2005b, p. 3). The framework aimed at establishing a shared understanding of the issues in an international and interdisciplinary environment. Among the fundamental principles of the DeSeCo programme process was that it approached

> "the question of competencies via the perspective of a successful life and a well-functioning society, conceiving the potential societal benefits of a well-educated citizenry as including a productive economy, democratic processes, social cohesion and peace. At the individual level, the potential benefits of competencies entail successful participation in the labor market, in political processes, and in social networks; and meaningful interpersonal relations and general satisfactions with one's life" (Rychen & Salganik, 2003, p. 5).

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[1] These two surveys are conducted by the International Association for the Evaluation of Educational Achievement (IEA) which is a non-profit international cooperative of national research institutions, government research agencies, scholars and analysts whose goal is to evaluate, understand and improve education worldwide. The IEA has been conducting large-scale assessments in education for the past 55 years. Studies such as TIMSS and PIRLS have been used by the OECD to prepare editions of the document Education at a Glance. The OECD Teaching and Learning International Survey (TALIS) and PISA are both conducted in partnership with the IEA (website: www.iea.nl).

Reflective thought and action which "demands relatively complex mental processes and requires the subject of a thought process to become the object" (OECD, 2005b, p. 8) was recursive throughout the framework. Moreover, the focus was on non-cognitive factors such as attitudes, motivation and values, which are not necessarily or exclusively acquired and developed in the domain of formal education and which go beyond the assessment of knowledge and skills. In summary, three clusters of key competencies were identified:

1. *using tools interactively* based on the need to keep up to date with technologies, to adapt tools according to one's necessities and to participate in active dialogue with the world. This could be achieved through an interactive use of language, symbols, texts, technology, knowledge and information;

2. *interacting in heterogeneous groups* stemming from the need to be able to value diversity in a pluralistic society, and the importance of empathy and social capital. The competencies required in this cluster are the ability to relate well with others, work well in teams in a cooperative manner and manage and resolve conflicts;

3. *acting autonomously* to address the need to realise one's identity and set goals in a complex world, to exercise rights and take responsibility and to understand one's environment and its functioning. The competencies identified were acting within a bigger picture, orienting one's own life and reaching the pre-set goals, and defending one's own rights, interests, limits and needs.

As the Delors report, this framework proposed an evolutionary model of human development within a lifelong learning perspective acknowledging that formal education alone cannot provide all of the competencies needed for life. Among the reasons presented in the *Executive Summary* of the DeSeCo project (OECD, 2005b) were that competency development continue to be acquired throughout life, demands are subject to change due to socio-economic developments and advancements in technology, and evidence from developmental psychology proved that competency

development does not stop at adolescence. This is especially the case for the ability to think and act reflectively.

1.3.1.3 A health promoting and wellbeing-oriented perspective on competencies

Competencies related to psychosocial aspects were identified by the WHO in 1997 within the programme on mental health. In reality, this document was originally compiled in 1993 to guide and facilitate the development and implementation life skills education in schools. It can be considered as one of the first attempts to capitalise the time children spend at school to gain competencies that are not specifically tied to a particular subject. The life skills programme was suggested as a transversal process which all teachers, irrespective of the subject taught, had the responsibility to transfer these skills. The document defined psychosocial competence as

> "a person's ability to deal effectively with the demands and challenges of everyday life. It is a person's ability to maintain a state of wellbeing and to demonstrate this in adaptive and positive behaviour while interacting with others, his/her culture and environment" (WHO, 1997, p. 1).

The complementary life skills identified were paired to reveal 5 main life skills areas, which are the foundation for psychosocial competency. The core skills identified were: i) *decision making and problem solving*, ii) *creative thinking and critical thinking*, iii) *effective communication and interpersonal relationship skills*, iv) *self-awareness and empathy*, and v) *coping with emotions and coping with stress* (WHO, 1997). The document stressed the importance of instilling the right values and attitudes and providing the knowledge necessary for students to be able to acquire these life skills. What is particularly interesting about the skills identified is that they are not specifically related to health but still could be considered as indispensable to prevent ill-health and promote physical, psychological and social wellbeing.

Another contribution worth noting with regards to the centrality of psychosocial competencies and in line with the perspective of the ability to manage life as a strategy for health, is Aaron Antonovsky's theory (1979) on the need to build a strong Sense of Coherence (SOC) in the early years of childhood in order to be able to face the challenges in adult life. In synthesis, according to Antonovsky, SOC expresses the extent to which one has a pervasive, enduring, though dynamic, feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable and explicable; (2) the resources are available to one to meet the demands posed by the stimuli; and (3) these demands are challenges, worthy of investment and engagement (Antonovsky, 1987).

At the basis of SOC are three important factors: comprehensibility, meaningfulness and manageability which respectively represent the cognitive, the instrumental and the motivational components. In other words, an individual's ability to assess and understand a situation, find a meaning why one should act, and also have the capacity to do so. This last factor requires what Antonovsky called General Resistance Resources; a sort of tool kit of resources "bound to their person and capacity but also to their immediate and distant environment as of both material and non-material qualities from the person to the whole society" (Lindström & Eriksson, 2005, p. 440).

The way Antonovsky envisaged the use of these GRRs is very much in line with the definition of competencies proposed earlier in this chapter. The American-Israeli medical sociologist, within his salutogenic framework, postulated that what is important is not the resources themselves, but the ability to use and re-use them as the need arises when faced with unpredictable situations.

1.3.1.4 The EU on the identification of competencies

The ambitious agenda established during the meeting held in March 2000 in Lisbon among the EU leaders of the time can be considered as the trigger that led to a number of initiatives which took place in the next decade in the field of competency identification and development. The strategic goal of the Lisbon Agenda was for the EU

"to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion" by 2010 (EP, 2000, para. 5). Specific reference to strategies relating to educational reform within an inclusive perspective, the identification of competencies for students and high-quality teacher education can be found in the strategic aim "modernising the European social model, investing in people and combating social exclusion" (EP, 2000, Heading). Point 26 of this document stated that Member States were to take the necessary action to meet the following targets:

- "a substantial annual increase in per capita investment in human resources;

- the number of 18 to 24 year olds with only lower-secondary level education who are not in further education and training should be halved by 2010;

- schools and training centres, all linked to the Internet, should be developed into multi-purpose local learning centres accessible to all, using the most appropriate methods to address a wide range of target groups; learning partnerships should be established between schools, training centres, firms and research facilities for their mutual benefit;

- a European framework should define the new basic skills to be provided through lifelong learning: IT skills, foreign languages, technological culture, entrepreneurship and social skills; a European diploma for basic IT skills, with decentralised certification procedures, should be established in order to promote digital literacy throughout the Union;

- define, by the end of 2000, the means for fostering the mobility of students, teachers and training and research staff both through making the best use of existing Community programmes

(Socrates, Leonardo, Youth[2]), by removing obstacles and through greater transparency in the recognition of qualifications and periods of study and training; to take steps to remove obstacles to teachers' mobility by 2002 and to attract high-quality teachers. […]" (EP, 2000, para. 26).

The tangible outcomes of this agenda include the European Qualifications Framework for Lifelong Learning; the Common European Framework of Reference for Languages; reforms related to higher education course organisation and certifications, also as a result of the Bologna Process; the certificate supplements; the Europass Curriculum Vitae and the Erasmus+ Programme. With regards to the identification of competencies, the guiding model for Member States is the European Reference Framework on Key Competencies for Lifelong Learning published as an annex to the Recommendation of the EP and of the Council of 18th December 2006 (Official Journal of the European Union [OJEU], 2006). The eight key competencies are the following; the first three are subject-specific whereas the last five are transversal:

1. *Communicating in a mother tongue*: ability to express and interpret concepts, thoughts, feelings, facts and opinions both orally and in writing.
2. *Communicating in a foreign language*: as above, but includes mediation skills (i.e. summarising, paraphrasing, interpreting or translating) and intercultural understanding.
3. *Mathematical, scientific and technological competence*: sound mastery of numeracy, an understanding of the natural world and an ability to apply knowledge and technology to perceived human needs (such as medicine, transport or communication).

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[2] Since 2014, the Socrates, Leonardo and Youth Programmes all fall within the Erasmus+ Programme. For this new programme the budget has been increased by 40%, reaching 14.7 billion euros. The aim of these programmes has always been that of promoting mobility, education and training among citizens of all ages (www.europa.eu).

4. *Digital competence*: confident and critical usage of information and communications technology for work, leisure and communication.

5. *Learning to learn*: ability to effectively manage one's own learning, either individually or in groups.

6. *Social and civic competences*: ability to participate effectively and constructively in one's social and working life and engage in active and democratic participation, especially in increasingly diverse societies.

7. *Sense of initiative and entrepreneurship*: ability to turn ideas into action through creativity, innovation and risk taking as well as ability to plan and manage projects.

8. *Cultural awareness and expression*: ability to appreciate the creative importance of ideas, experiences and emotions in a range of media such as music, literature and visual and performing arts.

In this framework the term competence is defined as a "combination of knowledge, skills and attitudes appropriate to the context [whereas] key competences are those which all individuals need for personal fulfilment and development, active citizenship, social inclusion and employment" (European Communities, 2007, p. 3). Further, the framework emphasises that each of the key competences is considered fundamental to succeed in a knowledge society. In fact, although presented as eight separate competencies, they are intricately related as aspects of one domain underpin another. The recurring themes throughout the Framework are "critical thinking, creativity, initiative, problem-solving, risk assessment, decision-taking, and constructive management of feelings play a role in all eight key competences" (European Communities, 2007, p. 3). One can notice how the same skills and competencies identified in the UNESCO, the OECD and the WHO documents are all reflected within this framework. However, one must point out that a number of scholars and teachers view this evolution as geared towards addressing the demands of the labour market and employers' expectations (Halasz & Michel, 2011; Elfert, 2015).

Reports from the OECD (2009) and the EC (2012), provide evidence of great development for the promotion of key competencies through formal, non-formal and

informal education on national levels. As affirmed by Ananiadou and Claro (2009), examples of private sector involvement in projects such as "the Partnership for 21 skills (www.21stcenturyskills.org) and the Cisco/Intel/Microsoft assessment and teaching of twenty-first century skills project (www.atc21s.org) also point to the importance currently attached to this area" (p. 6). As a response to this paradigm shift especially at higher education institution levels which, as highlighted so far throughout this chapter, is a result of socio-economic demands and advancement in technology, projects on the development of profession-specific core competency frameworks are on the increase. Obviously and one could say most importantly also concerns the teaching profession.

1.3.2 The endorsement of a key-competency perspective in Italy

Taking into account the European and International developments mentioned earlier on both the identification of competencies, their assessment and their standardisation across countries, changes in the Italian educational policy on these issues can be said to have started in 1997 with Law 10 December, n. 425, which reformed the school-leaving examinations procedure at the end of high school. A succession of laws, decrees and amendments followed, confirming the gradual shift from a knowledge-based to a competency-based approach both at policy and practice levels (Chiappetta Cajola & Ciraci, 2013).

In response to the Recommendation of the EP and of the Council of 18th December 2006 (Official Journal of the European Union [OJEU], 2006), a ministerial decree was released a year later under the then Minister of Education Fioroni (Ministro della Pubblica Istruzione, 2007). This was aimed at addressing the issues of raising compulsory school age, ratifying the Recommendation and outlining the competencies Italian students are expected to acquire before leaving school. In fact, in the attached technical document and annexes, the key competencies for lifelong learning are cited and are considered as a common cultural standard to prepare youth for adult life and provide them with a method to continue to learn throughout their existence.

However, the Ministry of Education did not limit itself to presenting the competencies identified on a European level but integrated them to correspond better to the Italian educational system. The framework is based on two levels of competencies presented in two separate annexes: subject-specific and key competencies. Annex 1 provides the subject specific competencies that are based on four cultural axis (linguistic, mathematical, scientific-technological and historical-social) for which sixteen competencies are identified and the knowledge and abilities required for each are presented. Annex 2 of the Decree indicates the key competencies called *competenze chiave di cittadinanza*, hence underlining the focus on education for citizenship and democracy in contrast with the socio-economic agenda the paradigm of core competency-development has gained over time. These can be grouped under three headings:

- intrapersonal processes which includes the competencies of (1) *learning to learn* and (2) *programming and planning*;

- interpersonal relationships that includes (3) *communicating through different forms of media*, (4) *collaborating and participating* and (5) *acting autonomously and responsibly within a given social circle*;

- interacting with the world which envisages the competencies of (6) *problem solving*, (7) *identifying connections and relationships among and within systems and phenomena*, and (8) *acquiring and interpreting information critically*.

On the basis of the regulations regarding the national curriculum guidelines for nursery, primary and lower secondary education (MIUR, 2012a), the certification of competencies was also introduced for students nearing the end of each cycle[3]. This ministerial decree stated that the procedure of attesting competencies aimed at

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[3] School education is compulsory for 10 years in Italy, from 6 to 16. Children reach the end of primary school at the age of ten, lower secondary school at the age of thirteen and are obliged to attend upper secondary school for two years before proceeding to three years of high school. These years are divided into two cycles: the *primo ciclo* includes nursery, primary and lower secondary school whereas the *secondo ciclo* refers to upper secondary and high school. Certification of key competencies is envisaged at the end of each of these periods, at the age of 10, 13, 15 and 18.

describing the levels of attainment which the students acquire progressively throughout their school years (MIUR, 2015a). This highlights the educational aspect of the usefulness for such documentation to keep record of the students' competency profile. For the first years the format and the content of the certificate was pretty much left at the discretion of the school. However, since 2015 official formats have been provided which require teachers to provide student feedback regarding the eight key competencies for lifelong learning as recommended by the EP and the Council (OJEU, 2006).

1.4 Teacher Competencies

In recent years teachers have been identified as the main catalysts without whose approval no philosophy, policy or strategy can be translated into action. Indeed, literature on teacher competency profiling flourished since the turn of the 21st century also as a consequence to the paradigm shifts related to the context and the core curricula to be taught. Some examples include *A statistical profile of the teaching profession* published by UNESCO and International Labour Office (ILO) (Siniscalco, 2002), the OECD document *Attracting, Developing and Retaining Effective Teachers* (2005a) and the OECD TALIS survey reports (latest publication in 2014a), the *Supporting Teacher Competence Development for Better Learning Outcomes* (EC, 2013) and the EC, the Education, Audiovisual and Culture Executive Agency (EACEA) and Eurydice report on *The teaching profession in Europe: Practices, perceptions and policies* published in 2015, to name only a few.

Currently, the OECD is also conducting research on Initial Teacher Preparation (ITP) to explore how countries attract and select the most suitable candidates into ITP programmes, deliver and certify the courses and support beginning teachers (OECD, 2016). Moreover, research on the identification of the major sources of variance in student's achievement conducted by Hattie (2003) has confirmed that about 30% of the variance depends on what teachers "know, do, and care about" (p. 2). These initiatives and the data provide sufficient evidence of the need for a common framework that could

form the basis for the identification of standards and the establishment of an accreditation system that would guarantee quality education for all.

1.4.1 Examples of competency models

Analysing the different models available in literature, competencies that have been regarded comprised not only the dimensions of subject-specific knowledge but also ability, attitudes and values related to teaching. This is, of course, in line with the strategic goals of creating inclusive contexts and of focusing on competency-based learning and outcomes. The structure of teachers' knowledge outlined by Shulman (1987, 1998, 2004) and the metaphor of the three *hs* - *h*ead, *h*and and *h*eart - has inspired a number of models for competency profiling and teacher education programming (Baumert & Kunter, 2013; EADSNE, 2012; Rouse, 2008). Shulman (2004) identifies three dimensions which he refers to as the three apprenticeships:

1. the 'apprenticeship of the head' which includes cognitive and theoretical dimensions of knowledge needed for the profession;
4. the 'apprenticeship of the hand' that refers to the technical and practical skills required to teach;
5. the 'apprenticeship of the heart' that gives value to ethical and moral dimensions, attitudes and beliefs.

The forms of knowledge he identified were *general pedagogical knowledge, subject matter content knowledge, pedagogical content knowledge, and curricular knowledge*; later extending this typology to comprise *knowledge of learners, knowledge of educational context, and knowledge of the philosophical and historical aims of education* (Shulman 1987). Furthermore, in his work on the comparison of professions and teacher professionalisation, Shulman (1998) enlisted six attributes that can be considered characteristic of all professions:

- "The obligations of *service* to others, as in a 'calling';
- *Understanding* of a scholarly or theoretical kind;
- A domain of skilled performance or *practice*;

- The exercise of *judgment* under conditions of unavoidable uncertainty;
- The need for *learning from experience* as theory and practice interact;
- A professional *community* to monitor quality and aggregate knowledge" (p.516, *italics in original*).

1.4.1.1 The Profile of Inclusive Teachers

The profile of inclusive teachers can be considered as the first attempt to identify the knowledge, skills and attitudes to work in inclusive contexts. However, comparing this model to Shulman's proposal, one can find many similarities to the forms of knowledge and the six attributes he identified. This document is one of the outcomes of the Teacher Education for Inclusion (TE4I) project whose goal was to "identify the essential skills, knowledge and understanding, attitudes and values needed by everyone entering the teaching profession, regardless of the subject, specialism or age range they will teach or the type of school they will work in" (EADSNE, 2012, p.1). Twenty-five countries participated in this three-year endeavour and the 55 country experts included policy makers who hold a stake in teacher and inclusive education, and teachers – both general and specialist educators. In addition the profile document saw the involvement of over 400 stakeholders including Initial Teacher Education (ITE) teachers, students, parents and families.

As reported in the document, this competency profile is a direct response to Agency country representatives' requests for a tangible resource that would provide the information regarding the knowledge, attitudes and skills necessary to work in inclusive settings. It was primarily designed to inform ITE Programming in terms of the identification of relevant content, methods and desired learning outcomes.

The three parameters used to guide the development of the profile were that inclusion is understood as a rights-based approach grounded on a number of core values; a broad approach was adopted to address practical and conceptual challenges when focusing on isolated competencies for teaching in inclusive contexts; and that all countries, notwithstanding their context-specific priorities and policies, subscribe to a framework

of international and EU policy. The profile is based on four underpinning values relating to teaching and learning. Each of these values is then associated with two areas of teacher competency. Table 1.2, below, presents a summary of the values and areas of competency (EADSNE, 2012, pp. 11-18).

For each of the eight areas of teacher competency, a list of attitudes and beliefs, essential knowledge and understanding and the crucial skills and abilities to be developed is presented. This is based on the premise that " [a] certain attitude or belief demands certain knowledge or level of understanding and then skills in order to implement this knowledge in a practical situation" (EADSNE, 2012, p. 7).

Table 1.2: Core values and areas of teacher competency in the profile of inclusive teachers

Core value	Area of teacher competency
Valuing Learner Diversity: learner difference is considered as a resource and an asset to education	A. Conceptions of inclusive education B. The teacher's view of learner difference
Supporting All Learners: Teachers have high expectations for all learners' achievements	A. Promoting the academic, practical, social and emotional learning of all learners B. Effective teaching approaches in heterogeneous classes
Working With Others: Collaboration and teamwork are essential approaches for all teachers	A. Working with parents and families B. Working with a range of other educational professionals
Personal Professional Development: Teaching is a learning activity and teachers take responsibility for their lifelong learning	A. Teachers as reflective practitioners B. Initial teacher education as a foundation for ongoing professional learning and development

Reading through the domains of competency some key aspects do emerge. Linking back to Shulman's apprenticeships, the core value *valuing learner diversity* reflects the heart – the ethical and moral dimensions. The principles of inclusive education are based on a social rights-based model where mainstreaming is considered as the only option. Learners are seen as resources that add value to schools, communities and

societies. Teachers need to be able to identify the most appropriate ways to respond to diversity and should be empathetic to the diverse needs. They should be aware of their own beliefs and attitudes and the impact these have on their actions.

For the second core value, *supporting all learners*, emphasis is placed on the apprenticeship of the hand – the technical and practical skills in teaching. Examples include collaborative working, being an effective verbal and non-verbal communicator, the ability to develop learning to learn skills for learners, facilitating co-operative approaches and implementing positive management behaviour, differentiating methods, content and outcomes for learning and many others. The third core value, *working with others*, concentrates on technical and practical skills that are more related to the interaction with colleagues, other professionals other the community at large. A lot of attention is given to teamwork, building communities and contributing to wider school partnerships.

Personal professional development is related to the apprenticeship of the head. Important key elements include the appreciation that teaching is an ongoing learning experience and teachers need to dedicate time to systematic evaluation of and critical reflective thinking on one's own doings. Reflection should be seen as a collaborative experience to be shared with others to reflect in and upon action. This is because as Loughran asserts, it is through this "development of knowledge and understanding of the practice setting and the ability to recognize and respond to such knowledge that the reflective practitioner becomes truly responsive to the needs, issues, and concerns that are so important in shaping practice" (Loughran, 2002, p.42).

Importance is also given to knowledge related to educational law and the legal context teachers work in. Teachers should be aware of opportunities and routes for further education and training. Their practice should be based on action research, a cyclical process of action, reflection and adoption of new actions. Lastly, inclusive teachers need to be flexible problem solvers, efficient time managers and decision makers.

1.4.2 The shift to competency-based teacher education and recruitment in Italy

As regards teacher education, first of all a clear distinction needs to be made among the generalist teachers, the specialist teachers and the LSTs as each of these figures follow different educational routes to obtain their warrant. Generalist teachers are those teaching in primary school. They teach all the main subjects from mathematics to Italian, geography and so on. The specialist subject teachers may teach both in primary, lower and upper secondary schools but their training is limited to the teaching of one disciplinary area, for example Italian, geography and history or physical education. The LSTs are present in all levels of schooling in mainstream schools[4] and their assistance is required in those classes where students with a certified disability or SLD are placed.

The latest laws regulating the acquisition of a teachers' warrant differ between generalist, specialist subject and learning support teachers. To become a nursery or primary school generalist teacher, a single-cycle Master Degree in Primary Education is now required, whereas for specialist teachers, students must first hold a Master Degree (5 years) in the subject they wish to teach and then follow a Post-Graduate Course in Education (one year). Those wishing to become LSTs need to take an additional specialisation course following the acquisition of the teachers' warrant in primary or secondary education.

With regards to course content related to special and inclusive education, in the Primary education course 31 European Credit Transfer and Accumulation System (ECTS)[5] credits are allocated to themes related to the teaching of students with special educational needs. As for specialist teachers, these only approach pedagogical and didactic knowledge when they have reached their sixth year of professional training, i.e.

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[4] As previously outlined, special schools were abolished in 1977 and to date only 71 schools are still open throughout the country [24].

[5] In addition to these modules, the Ministerial programme envisages 24ECTS in special didactics and pedagogy and makes reference to the importance of including modules on intercultural pedagogy and teaching Italian as a second language, although the number of credits is not specified (MIUR, 2010).

the one year course called *Tirocinio Formativo Attivo*. During this course the number of credits specifically allocated to special pedagogy and didactics are 6 ECTS (42 hours) out of 60 ECTS (MIUR, 2010). Practical workshops and on-site training is envisaged in all courses.

Once a teacher has obtained the warrant, he or she can opt to specialise in becoming an LST. The 750-hour intensive course, which is regulated by the Ministry of Education (MIUR, 2011a), must not last less than 8 months. Teachers wishing to enrol in the course must take a written entry test for which the demand is much higher than the places available. The course must last not less than 8 months and usually does not exceed a calendar or academic year. By the end of the course, the participants will have completed a training programme

> "composed of lectures (270hrs), workshops (180hrs), on-site teaching practice (150 hours), ICT hands-on workshops to support differentiated learning and instruction (75hrs), and tutorials (75hrs). During the course, the modules offered mainly tap on pedagogy and didactics for inclusive, special education and innovative teaching strategies (157.5hrs, 21 ECTS), educational and developmental psychology (60hrs, 8 ECTS), neuropsychiatry (30hrs, 4ECTS), and school legislation and policy (22.5 hours, 3 ECTS)" (Pace & Aiello, 2016).

As mentioned earlier, the final aim of the course is to acquire the qualification necessary to work as Learning Support Teachers in either nursery/primary or lower/upper secondary mainstream schools. The participants involved in this research were students attending this type of programme. Further information about the sample is presented in Chapter 3.

With regards to in-service teachers and their professional development it is important to outline that Italian schools are characterised by an extremely heterogenic group of professionals with diverse academic backgrounds and levels of training varying from a

high school diploma certificate to post-graduate degrees and a variety of specialisation courses (Aiello et al., 2014). An array of continuous professional development (CPD) courses are offered by the Ministry through the universities to promote lifelong learning. In these courses, the theme of inclusive education and innovative teaching strategies useful to support inclusion are central. Each university presents its own offer and very often professors deliver lectures and organise seminars and workshops in the schools. The Ministry also funds a number of specialisation courses and projects such as specialisation courses on autism spectrum disorders and psychomotor development.

On policy level, the very first tangible indication that will require programme reform at university level is Law 107 of 2015. This legislation has brought about a complete revolution in the educational system which obviously also concerned initial and continuous professional development, and most particularly teacher recruitment. Article 1, comma 79 of Law 107 of 2015 states that as from this scholastic year 2016/2017, each Head of School is responsible for the call for applications and selection of new teaching staff that best correspond to the professional profile required for their school three-year educational plan. There are some limits, however. The teachers chosen need to be assigned to the respective territory and must already have an indefinite contract with the Ministry of Education. Hence, similarly to the trend in many other European countries (EC, 2014), teachers will no longer be assigned to a school on the basis of seniority and points but will be evaluated on their curriculum vitae, experience and professional competencies.

The related implementation guidelines released (MIUR, 2016) specified that teacher professionalism is qualitatively built and characterized by the school contexts in which a teacher has worked in. Among the competencies which the document makes reference to are methodological and pedagogical competencies, classroom and time management, and the ability to relate to students. Certified experience of the use of innovative teaching strategies, implementation of practical workshops, the coordination of or involvement in school projects, and having managed staff working groups, are provided as examples of indicators of a competent teacher. Therefore, this new system aims at giving value and merit to the experience and professional growth that dedicated teachers

have built over the years, especially when considering that CPD has never been compulsory.

Another important aspect is the indications provided regarding the type of training courses, emphasising that those centred on action-research in which seminars and lectures are only a part, are highly considered. Hence, attributing more value to quality rather than quantity. An important incentive, also introduced with the Law 107 of 2015, which it is hoped will entice teachers to invest in competency acquisition is a yearly bonus of €500 to be spent on technology, books, training courses, museum entrances and any cultural activity deemed appropriate for their professional development. This reform will naturally bring about further change in the way courses are planned, delivered, evaluated and certified. In addition, it is envisaged that some form of accreditation system will be needed to monitor and accredit the certificates and qualifications being issued.

1.5 Addressing Complexity in Teaching and Learning

Having laid the foundations as regards *what* (subject-specific, transversal and professional competencies), *where* (school but also non-formal and informal contexts), *who* (all citizens irrespective of ability, age, gender, ethnicity; teachers play a crucial role), *why* (to face complexity characterising the 21st century and lead a healthy, productive life) and *when* (throughout life – lifewide and lifelong), one fundamental question remains unanswered: *how*?

How should teachers and other stakeholders act to be truly inclusive? How can the acquisition of the transversal competencies be facilitated for students? How should teachers be trained to acquire the knowledge and skills necessary and have the right attitude?

While there seems to be some level of agreement among different schools of thought on the object of education, the competencies necessary for the 21st century and the adoption of inclusive practices, the functioning of the whole mechanism is still as

complex as it was in the 90s, if not more when considering the current socio-economic and geo-political scenario. Definitely, there is no single solution to solve this. Yet, as social scientists we cannot risk limiting ourselves to accepting that "complexity is out there, people are using it and the reason they are using it is because it makes sense of the real social systems being examined" (Byrne & Callaghan, 2014, p. 233).

These concluding paragraphs to this chapter offer a possible guiding framework for action which in Italy is slowly but steadily gaining ground in the field of didactics. The theoretical underpinnings of this framework are deeply rooted in Frauenfelder's bio-educational perspective (1983; 1994), set forth three main lines of research: enactivist didactics (Rossi, 2011), neurodidactics (Rivoltella, 2012) and simplexity (Sibilio, 2014a, 2014b, 2015) which highlighted that the teaching-learning process is non-linear. In the wake of these reflections and the convergence of these three orientations aimed at providing a solution to face complexity in education, the focus was shifted to action and agency in teaching. More specifically, research has concentrated on how the embodied dimensions influence on the one hand the subjective aspects of action as understood within the field of human sciences, and on the other hand the objective aspects in terms of neurophysiological mechanisms as interpreted within the field of hard sciences (Aiello, Sharma & Sibilio, 2016b). This led to the identification of a common denominator which guided research on action in teaching and teacher education – a systemic perspective which involves simplex mechanisms that leads to the "biological autopoiesis as a mechanism to adapt to its environment" (Orefice, 2006, p. 6, in Aiello et al., 2016b).

1.5.1 The theory of simplexity

As Sibilio (2014) points out in his book *La didattica semplessa*, the complex nature of education has been theorised by leading scholars from Dewey to Maritain, Bertin and Morin but what is now needed is to find strategies to face this context. Citing Gell-Mann and his stance on complexity, Sibilio (2014) suggests considering the educational system as a complex adaptive system: "a system whose nested structure is composed of composite units which are complex adaptive systems in themselves and whose links and

interactions among them are of a non-linear type" (p. 258; my translation). To explain this phenomenon better and to illustrate the emergent nature of complex systems, Sibilio proposes Gell-Mann's definition which states that:

> "Examples on Earth of the operation of complex adaptive systems include biological evolution, learning and thinking in animals (including people), the functioning of the immune system in mammals and other vertebrates, the operation of the human scientific enterprise, and the behavior of computers that are built or programmed to evolve strategies for example by means of neural nets or genetic algorithms. Clearly, complex adaptive systems have a tendency to give rise to other complex adaptive systems" (Gell-Mann, 1995, p.3 in Sibilio, 2014, p.17).

As a result, Sibilio suggested the theory of simplexity stating that the concepts on which the reflection on simplexity is based, bring to light the regulatory principles and properties of all adaptive systems that are characterized by complexity. This approach, Sibilio affirms, manifests a resistance to dispersion and dissolution, often characterising research and practice that limits itself to accepting that the phenomenon is too complex. What is particularly fascinating is that Berthoz's concept of simplexity was not theorised for the field of education and yet Sibilio's application to education and didactics (Sibilio, 2014a; 2014b; 2015; 2016) can aid in facilitating competency-based teaching and learning in inclusive contexts.

Before delving further into the theory of simplexity and its application to teaching and learning, two important clarifications need to be made as regards the term. First of all, although it may appear to be the antonym of complexity, simplexity does not deny its fundamental values nor the phenomenon per se. Secondly, it should neither be considered as a synonym of simplicity since a simplistic perspective "refers to the absence (or near absence) of complexity" (Gell-Mann, 1994 as cited in Berthoz, 2012, p. x). Simplexity, on the other hand, is "an ensemble of biological devices that appeared in the course of evolution to allow a complex adaptive system, as is the human being, to

thrive by processing 'complex situations very rapidly, elegantly and efficiently, taking past experience into account and anticipating the future' (Berthoz, 2012, p.3)" (Pace & Aiello, 2015). Underpinning this concept is the principle of intersubjectivity which refers to the ability of these systems to understand each other's intentions.

The physiologist and expert in cognitive neuroscience, Alain Berthoz, illustrates how a set of characteristics forming an organisational matrix constitute the tools for the creation of different patterns of interaction among the constitutive parts of a system. Further, he argues that these can not only be observed when comparing distinct complex adaptive systems from "a hive, an ant colony, a termite mound [to] an army, factory or society itself" (Berthoz, 2012, p.76) but also within the same system. An example to this is observing a human being's biological activity as a whole or broken down into separate, yet complex systems such as the circulatory, the respiratory or the lymphatic system; each working independently but at the same time their ensemble, together with other internal and external systems keep the human being alive. This same principle has been applied to various other contexts from engineering to architecture and social science research. Berthoz (2012) enlists six "basic characteristics of life that [he believed] rely on simplex properties that constitute tools for life" (p. 6) and six simplifying laws and principles that define the framework. All are applied independently or in parallel to create different patterns of action and interaction to face complexity. The following paragraphs provide a description of each of these tools and principles.

1.5.1.1 Simplex properties or tools

MODULARITY

The first essential characteristic of any living organism is the ability to separate different functions. "Different types of memory – explicit, implicit, procedural and so forth – have separate neuronal networks" (Berthoz, 2012, p. 7). This can be described as breaking down a system into a number of simpler subsystems in specialised modules to understand it even if everything must be put back together again. Such processes can be observed in society where everyone has a different role or profession but all need one

another and together make a community. In education, knowledge is divided into subjects but it is imperative for students to be able to create a whole picture. This coexistence of diverse functions ensures the use of diverse adaptive schemes simultaneously to facilitate better control of action (Sibilio, 2014a).

SPEED

When faced with complexity, living organisms often need to act swiftly. They need to find elegant efficient solutions that are not necessarily simple. In 'fight or flight' or 'catch 22' situations, speed becomes indispensable. The translation of thought into action requires speed to guarantee continuity and fluidity in one's actions. This is imperative when teaching, for example, as very often teachers are faced with unpredictable situations they have to deal with immediately in order not to disrupt the lesson flow and make efficient use of the time available.

RELIABILITY

Unless a system is reliable, it is bound to fail. Reliability depends on mechanisms such as cooperation and redundancy to increase effectiveness. Teaching the same concept through different media and using examples from diverse contexts increases the chances that the concept is understood and assimilated. This tool can also be adopted in assessment and evaluation or research, whereby the adoption of various instruments to measure a variable or group of variables increases the reliability of the results. Applying the property of reliability within inclusive classrooms gives the possibility to all students to excel in one area or another, depending on their talents and preferences.

FLEXIBILITY, VICARIANCE AND ADAPTATION TO CHANGE

According to Berthoz, vicariance can be defined as mechanisms of the brain, creator of worlds. Within these mechanisms the brain creates imaginary scenes that anticipate the future and build it. In detouring in this unreal world, the brain becomes a gambler, besides being a simulator and emulator (Berthoz, 2015). Moreover, as Berthoz (2015) outlines, vicariance has become possible thanks to diversity, which is a fundamental property of the human being. This allows the individual to go beyond what is real, escapes from the rigid limits of norms, and draws on other resources to find original

solutions to problems that emerge when interacting with the environment or with others. Selecting from a repertoire of choices has become mundane in today's world. Whether it is about which food item to buy or more complex choices such as changing jobs, the individual has to find a solution, perceive, capture, decide, or act choosing from a repertoire of solutions. Yet, this may sometimes be stressful unless handled well. For this reason, flexibility, vicariance and adaptation to change become fundamental in decision making, problem solving, creative thinking, coping with stress and emotions, initiative taking and the spirit of entrepreneurship, the majority of which are competencies identified for both students and teachers working in inclusive schools.

MEMORY

Adaptive processes need to capitalise past experiences to face and predict the future. The multiple mechanisms of memory (explicit, implicit, episodic, verbal, iconic and effective)

> "constitute the *condicio sine qua non* of learning as these aid in imprinting information. Reliability and modularity are the properties that, interacting with memory, facilitate the retention of information through the imprinting of an engram. In considering memory as a foundation of the mechanism which allows the anticipation of the consequences of our action to take place, memory is also a property that interacts with flexibility and generalisation. This represents the foundation of all forms of learning and as a result the adaptive capabilities of learners" (Sibilio, 2014, p. 97; my translation).

GENERALISATION

This tool can be explained using the definition of competency that is one's ability to capitalise patterns of interactions and transfer them from one context to another even if the situations are not completely identical. A student's ability to apply a mathematical formula in everyday life or a teacher's ability to bring practical tangible examples to the classroom when explaining complex concepts are just some examples of generalisation.

1.5.1.2 Simplex principles

INHIBITION AND THE PRINCIPLE OF REFUSAL

This principle is at the heart of decision making. It is used to help the brain in choosing among an array of solutions, whether it is just a process of reflection or if it concerns taking action. In order to decide, one automatically has to inhibit all other options and the decision chosen is the one that prevailed over the others. "To think is to inhibit and disinhibit; to create is to inhibit automatic or learned solutions; to act is to inhibit all the actions that we do not take" (Berthoz, 2012, p. 13). Solving a mathematical problem or choosing a suitable teaching strategy to include all students may require inhibiting tried and tested solutions to make way for new options and routes.

THE PRINCIPLE OF SPECIALISATION AND SELECTION (UMWELT)

> "Most animals act according to their Umwelt; they sense only those aspects of the world that are relevant for their survival. […] Deciding involves selecting from the information around us whatever is pertinent to the goal of action. It is a principle of parsimony […]" (Berthoz, 2012, p. 14).

Linked to inhibition and the principle of refusal, this process is not only triggered as a response to a stimulus. Every day teachers and students alike filter information and select what is most relevant to them. The ability to do so helps in concentrating on the intentions one has set to reach. During a lesson, for example, teachers and students have to ignore many of the distractors that surround them, whether it is a noise from the nearby street or the chatter of other classmates during group work. They need to be able to select the stimuli that are important in that particular moment to reach their aim. Teachers also need to be aware of their subjective universe (umwelt) and how this influences how and what they teach. At the same time, they have to consider their students' umwelt in order to be able to establish a two-way communication.

THE PRINCIPLE OF PROBABILISTIC ANTICIPATION

Anticipating the future is based on memory of past experiences and the prediction of the consequences of ongoing action. This principle underpins reflective thought and emphasises the importance of reflection before, in, and after action. "This double strategy, both prospective and retrospective, situates the present in the dynamic flow of a changing universe" (Berthoz, 2012, p. 15). It is the underpinning construct of metacognition as it allows individuals to predict the possible consequences of their intentions and actions, hence be in control and manipulate their own future. An example in educational contexts could be a teacher's decision whether to reprimand a student. The decision will be based on the student's or other classmates' past reactions in similar situations and also of colleagues who had been in analogous circumstances with the same or other students. From the students' perspective, the choice of reaction will depend on his/her and other students' experiences with the teacher or other teachers and the consequences previous actions had led to.

THE DETOUR PRINCIPLE

Detouring is an example of how these principles are not simple rules but are able to simplify complex situations. As previously outlined, the brain looks for fact effective routes to take decisions to act. Applying a detour principle means taking into account composite variables to reach a solution. Without neglecting the usefulness of taking short-cuts, sometimes taking the longer route turns out to be faster. An example could be given in teaching foreign languages. Translating a new word to students is much quicker than trying to think of several examples, pictures and other resources to explain it. However, in doing so, students may tend to use that word in inappropriate contexts, try to translate other words and phrases literally which leads to error and confusion. Detouring is also essential for creative thinking and generating new ideas (Zollo & Sibilio, 2016; Sibilio, 2016). It is key for entrepreneurship as well as decision making and problem solving as very often the key is the non-linear nature of the principle itself.

THE PRINCIPLE OF COOPERATION AND REDUNDANCY

Cooperation and redundancy are processes that counteract the principle of specialisation and selection. Whereas with the latter principle individuals scan and

choose what is essential in a given situation, through cooperation individuals combine the information available from different sources to ensure that the information is coherent and reliable. A number of variables serve as frames of reference to mitigate the risk of error. Redundancy, instead, refers to the process of creating a back-up or fail-safe system to safeguard critical components or functions of a system. Being able to view a situation from different perspectives, egocentrically and allocentrically, provides additional information when forming one's opinion or taking a decision. Although this may sound far from intercultural, social and civic competencies, in reality this ability of perspective taking is fundamental to develop empathy (Berthoz, 2012) in teachers and students.

THE PRINCIPLE OF MEANING

Meaning is life. It cannot be superimposed on life (Berthoz, 2012). Finding meaning in being a teacher, in studying different subjects, in adopting inclusive practices, in implementing new strategies or in changing attitude, is essential to redefine one's intentions and desired acts. Here again critical reflective thought is key, as focusing the attention on the act implies affirming the principle of meaning whose foundations are in the act itself.

1.6 Conclusions

Although the scenario illustrated in this chapter may give the impression that better-trained competent teachers plus the adoption of an inclusive paradigm is equal to highly competent students and Education for All, in reality the equation is much more complex than this. A plethora of educational research has demonstrated that to guarantee the success of inclusive education, policy provision and teacher competency development are not enough, notwithstanding their indispensability and strong influence. Theories borrowed from other fields of research investigating intentions, action and behaviour outline a number of proximal and distal variables that impinge on teachers' willingness to adopt inclusive classroom practices. The following chapter critically outlines some of these theories, presents the theoretical framework guiding this thesis and reports some of the most important results supporting this argument.

2. Literature Review

"[...] many of our habits, not to mention our 'habitus' in the sense of Pierre Bourdieu, stem from the same type of mechanism. Decision making is often the ability to escape all our acquired habits, modes of thinking, or customary actions to create a new solution. The physiology of preference naturally entails a physiology of will."
(Emotion & Reason – the Cognitive Neuroscience of Decision Making,
Alain Berthoz, 2003, p. 213)

2.1 The Search for Variables Impinging on Action

Literature on the definitions and the design of competency models, whether targeted for the certification of student attainment or for professional development, always takes three essential aspects into consideration – knowledge, skills and attitudes. Examples of valid and reliable instruments to assess and evaluate knowledge and skills are readily available but this is not the case for attitudes. In addition, in the quest to pinpoint the sources of variance which hinder or enhance inclusion, knowledge and skills were found to be indispensable but, alas, not sufficient, whereas attitudes alone account for less than 30% of variance in actual behaviour (Sharma & Mannan, 2015; Armitage & Conner, 2001). Substantiating this argument are also studies on behaviour that consider attitudes as only one of the proximal determinants of an individual's intentions and behaviours, enlisting an array of distal factors that are at play.

Acknowledging that the education system is an intricately nested complex structure that adapts to its context and over time, and that the interactions among its composite units are never based on a linear cause-effect relationship (Sibilio, 2014), attention was drawn towards theories that take into consideration multiple levels of influence within an ecological approach. A critical overview of the theories rooted in an agentic perspective are discussed thereafter with the aim of providing insight on the proximal and distal factors that have been identified as possible predictors of intention and behaviour towards change. Stemming from studies on health and social behaviour, these theories have gradually become ingrained in educational research and have frequently

been the underpinning frameworks to investigate the factors influencing the implementation of inclusive classroom practices.

The final part of the chapter presents the salient research results available in Italian and international literature related to the research question: *What variables influence teachers' willingness to implement inclusive classroom practices?*

2.2 Ecological Perspectives and the Multiple Levels of Influence

It is a fact that no single theory dominates educational research due to its heterogeneous contexts and objects of research. In addition, adequately addressing a phenomenon often requires more than one theory as studies in education have often borrowed theories from other fields of research. Nevertheless, choosing theories embedded in an ecological perspective is an indisputable option since in explaining human action the relationships between organisms and their environments are central. Indeed, ecological approaches are based on two fundamental principles that have been widely acknowledged in human and social sciences. Firstly, behaviour affects and is affected by multiple levels of influence, and secondly, individual behaviour shapes and is shaped by the social environment (Rimer & Glanz, 2005). McLeroy, Bibeau, Steckler and Glanz (1988) identified five multiple levels of influence. These are summarised in Table 2.1.

At the intrapersonal and interpersonal levels all contemporary cognitive-behavioural theories encompass three basic concepts:
- "Behaviour is mediated by cognitions; that is, what people know and think affects how they act.
- Knowledge is necessary for, but not sufficient to produce, most behaviour changes.
- Perceptions, motivations, skills, and the social environment are key influences on behaviour" (Rimer & Glanz, 2005, p. 12).

On a community level, the theories and models address individual, group, institutional and community issues thus supporting the need for multi-dimensional approaches.

Table 2.1: Levels of influence in an ecological perspective (Adapted from McLeroy et al., (1988)

Level of Influence	Description
Intrapersonal Level	Individual characteristics such as knowledge, attitudes and beliefs
Interpersonal Level	Relationships within primary groups including family, friends, work and peers that influence one's social identity
Community Level	
Institutional Factors	Rules, regulations, policies, and informal structures, which may hinder or promote recommended behaviours.
Community Factors	Social networks and norms, or standards, which exist as formal or informal among individuals, groups, and organisations.
Public Policy	Regional, state, European and international policies and laws that regulate or support educational practices.

Bronfenbrenner's ecological systems model (1994) has been extensively applied to describe the interactions between different systems and their reciprocal influences. Bronfenbrenner viewed these systems as a series of nested structures, starting from the microsystem (*interpersonal level*) to the macrosystem (*community level - public policy*) with the individual (*intrapersonal level*) at the heart of the model. This is very much in line with Sibilio's (2014) view of the educational system and teaching as complex adaptive systems as outlined in chapter 1.

Applying this model to investigate the factors influencing teachers to adopt inclusive classroom practices, the teacher is at the innermost circle and the influence of the five systems become progressively distant, representing the degree of impact on the teachers' intentions and behaviour. Figure 2.1 illustrates the multiple levels of interaction between the systems and provides examples of variables impinging on the adoption of a new teaching methodology. An important underlying principle is the fact that "the power of developmental forces operating at any one systems level of the environment depends on the nature of the environmental structures existing at the same and all higher systems levels" (Bronfenbrenner, 1999, p. 11).

MACROSYSTEM

EXOSYSTEM

MESOSYSTEM

MICROSYSTEM

The teacher as an individual – gender, age, teacher identity, training

MICROSYSTEM - Colleagues, students, classroom environment, availability of resources, parents, administrative structures

MESOSYSTEM - Interactions among two or more settings in the microsystem

EXOSYSTEM - School policy and ethos, curriculum, collaboration with other professionals

MACROSYSTEM - Attitudes and ideologies of the culture influenced by public opinion, economic and political influences, ethical issues, educational policies

CHRONOSYSTEM – The unique influence of time on the patterning of environmental events, transitions and socio-historical conditions.

Figure 2.1: Bronfenbrenner's ecological model

Studying intentions and behaviour from an ecological perspective, thus marks an epistemological shift from the traditional objectives of behavioural science research. In addition, it broadens the focus from a view of behaviour as solely dependent on individual control to a standpoint which takes into consideration the relationship between the individual and the surrounding expectations, social structures, and resources.

2.3 The Concept of Agency

Underpinning various ecologically-grounded behavioural science studies is the concept of human agency. Agreeing on a single meaning of the term is difficult because the concept has been used in differing and overlapping ways and has been applied interchangeably with other terms such as habit, motivation, intentionality, freedom, will and creativity (Emirbayer & Mische, 1998; Biesta, Priestley & Robinson, 2015; Bandura, 1989). In an attempt to give a definition that would guide the reflections in this thesis, reference was made to the origin of the word. The noun 'agency' derives

from Medieval Latin *agentia*, which means 'active operation'. The noun of state from Latin *agentem* (nominative *agens*) means 'effective, powerful' while the present participle is *agere* which means 'act'[6]. Stemming from this ethymological analysis, therefore, are the keywords action, act (both as a verb and noun), agency, and agent all referring to a concrete '*doing*'.

2.4 Agency in Cognitive Neuroscience

In his books on how human beings perceive and control bodily movements (Berthoz, 2000), the cognitive neuroscience underpinning decision making (Berthoz, 2003) and the simplifying principles that allow living organisms to face complexity and thrive (Berthoz, 2012), the author provides a detailed intricate explanation of the science behind action and the act, which as previously outlined also derive from the word agency. For the purpose of this thesis it is merely presented, taking into account the risk of offering a very reductive delineation of his work should one try to explain them briefly. However, this short description is necessary as it provides further insight to what influenced the understanding of teacher agency in this research. The first of the three concepts to be outlined is *action*. Any action, whether referring to the basis of all cerebral activity or to an observable action,

> "is the intention to interact with the world or with oneself as part
> of the world. Action always has a goal; it is always backed up by
> purpose. It thus becomes the organiser of perception, the organiser
> of the perceived world. Action is also embedded in a more general
> concept, the act" (Berthoz, 2003, p. xi).

In this definition, Berthoz suggests that there is a clear distinction between action and the *act*. In fact, he defines this second concept as a combination of a series of actions. For example, while teaching, a teacher speaks, thinks about what to say next, uses

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[6] agency. (n.d.). *Online Etymology Dictionary*. Retrieved January 31, 2017 from Dictionary.com website http://www.dictionary.com/browse/agency

gestures, controls the tone of voice and facial expressions, moves within the classroom space, manages the classroom, hands out resources, writes on the board, praises students and does an infinite number of other actions, often managed simultaneously. Taken singularly, each of these actions is an intentional action in its own right but taken as a combination of purposeful actions, they give life to *an act* which bears its own meaning; in this case the act of teaching someone something.

The third concept mentioned in the definition of action, is *perception*. This is a fundamental piece of the complex puzzle as perception guides action and, ultimately the act. Starting from the premise that the function of the human brain is that of predicting the future, anticipating the consequences of action (its own or that of others), and of saving time, Berthoz suggests that "the brain is a simulator of action, a generator of hypotheses, and that anticipating and predicting the consequences of actions based on the remembered past is one of its basic properties" (Berthoz, 2003, p. xi). He then adds that "[t]he brain is thus essentially a comparator. It compares the state of the world with its hypotheses. […] This activity of comparing is always linked to intention, to a 'project' – or plan – of action (in the sense of projection)" (Berthoz, 2003, p. xi).

Therefore, the action of perceiving involves choosing from a repertoire of sense data only those relevant to or suitable for the action envisaged. However, this choice is

> "not based on the absolute value of rewards but on the subjective value, the difference between what it expects or desires and what it obtains. This difference is, of course, measured against a yardstick of factors that are social, cultural and so on. The distinction is important because it opposes two radically different conceptions of the brain: the so-called representational concept of the brain, which holds that the brain constructs an image of the world that guides action, and the idea I propose of a brain that is a part of the world, that has *internalised* its properties and *emulates* some of them but relates them to its own goals, which shape external reality by projecting onto it the brain's perceptions,

desires, and intentions. The brain simplifies the world based on its choices; it only perceives what it wishes to." (Berthoz, 2003, p. 280, italics in original)

This implies that what the brain perceives is already a selection of that which it retains pertinent to reach the goal of action. In other words, the brain inhibits a lot of information for the sake of functional economy. In addition to this, Berthoz identifies emotion as an activator of the mechanisms of selective attention and triggers a selection of objects perceived or neglected in the world. According to Berthoz, "emotion profoundly alters the relation of memory to perception of the present" (Berthoz, 2003, p. 282). He defines it as a perceptual filter which is fundamental in decision making processes since "our decisions depend a lot on what we perceive, on what our brain samples in the world and the way in which it connects the objects it perceives with the past" (Berthoz, 2003, p. 282). The advantage that humans are able to have wilful control of their actions, in fact, depends on the fusion between emotional and cognitive functions. Hence, reiterating the definition of action given earlier, this can be further elaborated by saying that "an action is indeed an intentional behaviour that predicts its own consequences since it results from a decision whose mechanism involves prediction and even attribution of emotional value" (Berthoz, 2003, p. 282).

2.5 Agency in Sociological Inquiry

2.5.1 Bourdieu's theory of practice

Major influence in recent literature on the concept of agency has been provided by the works of theorists of practice such as Bourdieu (1977; 1990) and Giddens (1984). Bourdieu's attempt to bridge the gap between subjectivism (the individual) and objectivism (society) led to the proposition of constructivist structuralism. Constructivism focuses on the social origin of schemes of perception, thought, and action, whereas structuralism studies the objective structures of culture and language that are thought to give shape to human action. The conceptual tools identified by Bourdieu to study agency and the way individuals construct their worlds and their

identities are 'habitus', 'capital', 'field' and 'distinction'. In his view these four concepts provide the understanding of how people perceive and construct their own social world without neglecting the influence of socially-affirmed structures. Hence, according to Bourdieu, a dualistic form of determinism exists. However, this determinism is characterized by a dynamic relationship because individuals invent and improvise within the structure of their routines recreating new structures. In other words, "individual agency and social structure are continually interconnected and co-constructive" (Burke, Joseph, Pasick & Barker, 2009, p. 8).

HABITUS

In his explanation of habitus, Bourdieu highlights the unconscious influence of the past on the decisions taken in the present. In fact, he defines habitus as "embodied history, internalized as second nature […]" (Bourdieu, 1990, p. 56). Habitus can be thought of as a set of internalized schemes through which individuals perceive, understand, appreciate, and evaluate the world. Bourdieu uses this concept to argue that conscious and deliberate intentions alone are not enough to explain why people do what they do. For Bourdieu, habitus is a structure which individuals do not respond to mechanically. Its embodiment in history reflects the connections individuals make between the past and the present when dealing with current scenarios, using their memory to anticipate the consequences of their actions.

This is a very similar view to Berthoz's explanation of how human beings use the property of memory to simulate the future on a cognitive level before taking action. In addition, both Bourdieu (1990) and Berthoz (1997; 2003; 2012) consider this process as an unconscious action that is strongly influenced by the immediate environment. Habitus, therefore, "shows that routine behaviour is the product, not simply of biological or psychological motivation, but also of a larger social, cultural, and historical forces. In doing so, it shows how individual behaviours relate to social rules and morality" (Crossley, 2004, p. 239 in Burke et al., 2009). Their choices are based on what they know rather than taking into consideration the whole spectrum of possibilities. Another fundamental aspect of Bourdieu's concept of habitus regarding agency, is that "its influences are outside conscious awareness, and therefore are

observable in the practices of individuals but *not reportable* by them in the form of conscious attitudes and beliefs" Burke et al., 2009, p. 8, italics in original). Hence, as Bourdieu affirms, people are not aware of all these influences and consider their attitudes and beliefs as 'natural' ways of how they should relate to the world around them. As a result, changing opinions or behaviour requires questioning one's own habitus and reaching the conclusion that this 'state' is no longer appropriate.

CAPITAL

Complementary to the idea of habitus are the concepts of capital, field and distinction. Bourdieu identifies four types of capital. These are cultural, social, economic and symbolic capital. According to Bourdieu (1986), cultural capital exists in three states: embodied, objectified and institutionalised. The former refers to long-lasting dispositions of the mind and body, the objectified state is the cultural goods from books to cultural opportunities the surrounding environment offers, whereas the latter, the institutionalised state, refers to the objectification of the cultural state such as possessing certificates of competence. Social capital can be defined as the resources one cultivates, consciously or unconsciously, individually or collectively, through a complex network of social relationships and mutual acquaintance that are fruitful in the short or long term. Economic capital refers to monetary resources that help fund an individual's cultural and social capital, while symbolic capital refers to one's social status within a culture. According to Bourdieu, within society, the richer one's capital, in all its types, the higher the chances of reaching better levels of social status. The individuals' habitus is developed through their continuous struggle to acquire and maintain these forms of capital. Similarly to Berthoz's position on the added value emotion given to action at cognitive level, Bourdieu suggests that the urge to thrive and climb the social ladder triggers a series of subconscious principles that organise thought and action.

FIELD

Although the concept of field may give the idea of a confined area or space, in reality, in Bourdieu's view, it holds very flexible boundaries creating a number of interconnecting fields. According to the sociologist, a field is a heterogeneous social-

spatial agora in which the agents act as traders of their cultural, social, economic and symbolic capital with the aim of strategically (re)creating new social structures. Individuals move from one field to another freely, yet their capital does not always provide the same negotiating power. An example could be the status a teacher holds in the classroom, with his or her relatives and within a social club. This implies that the individuals' habitus takes on different forms depending on their role within a given context. Moreover, it reflects how powerful positions within a field (the teacher in the classroom) imposes a dominant perspective on the less powerful agents within that field (the students), influencing their habitus (students behave differently in the presence and absence of a teacher). Hence, although the notion of habitus predisposes individual agency, it also inclines individuals toward a certain behaviour. Therefore, habitus can also be defined as an embodied state;

> "a socialized body. A structured body, a body which has incorporated the immanent structures of a world or of a particular sector of that world – a field – and which structures the perception of that world as well as the action in that world" (Bourdieu, 1998, p. 81)

DISTINCTION

The last of the four concepts is distinction. This refers to how individuals' tastes and choices, whether it is style of clothing, choice of music, food, book genre or sport, distinguish them from the mass, 'taste in luxury', or *en masses* them within a specific cultural group; those whose taste is based on necessity. This concept further emphasis how people's choices are dependent on capital and field, which in turn forms individuals' habitus.

2.5.2 Giddens's theory of structuration

In partial agreement with Bourdieu, in his structuration theory Giddens (1984) opposes the dualism of structure (external forces such as norms, rules and social systems that give similar social practices a systemic form) and agency (inner individual

capability to make a difference), arguing for a recursive nature of relationships between the two. His view slightly differs from Bourdieu's theory of practice due to the fact that he attributes more autonomy to the individual. Giddens affirming that structure and agency are of equal importance and views individuals as productive agents that create their social structure through their practices. On the other hand, Bourdieu "give more weight to class and social structure as determinants of perception and practice" (Burke et al., 2009, p. 8). Moreover, Giddens argues that it is the agents who produce the structures, and their reproduction and sustainability depends on the actions of the agents. Within this perspective, individuals are the creators of society's structure on the basis of invented values and norms that are, in turn, reinforced through social acceptance. Even if on the one hand these structures may be the cause of constraints, on the other hand they enable actors to act freely. Hence, individual choices are only partially constrained but remain choices nonetheless.

An important concept which bears some similarity with habitus is 'routines'. According to Giddens, actors develop routines that provide them with a sense of stability and security to face the complexity of everyday life. In fact, he defines a critical situation as "a set of circumstances which – for whatever reason – radically disrupts accustomed routines of daily life" (Giddens, 1984, p. 124). Routine practices determine the courses of action although the motives provide the goal to be reached. Having the ability to think and make choices, and having the power to shape their own actions, social actors adapt to their evolving understandings of the structural conditions. Indeed, the ability to access new knowledge and insights provided in social science research, results in a dialectical relationship between social scientific knowledge and human practices, which Giddens calls the double hermeneutic. Hence, contrary to what one may think, "structure is not 'external to individuals': as memory traces and as instantiated in social practices, it is in a sense more 'internal' than exterior to their activities" (Giddens, 1984, p. 25).

2.5.3 Emirbayer and Mische's chordal triad of agency

As postulated by Emirbayer and Mische (1998) in their argument for a conception of agency, these theorists of practice have given selective attention to the role of habitus and routines, viewing "human agency as habitual, repetitive, and taken for granted" (p. 963). In their view there is a need to overcome the one-sidedness of such theories of agency which tend to focus either on routinized patterns of action, or on goal orientation, or on judgement. The authors further argue that while these dimensions of agency constitute a part, they are not able to explain its full complexity even when they are merged into agency itself. In their opinion the dynamics that occur among these dimensions and of how their interaction varies within different social contexts of action is lost. Hence, they propose that human agency should be reconceptualised as

> "a temporally embedded process of social engagement, informed by the past (in its habitual aspect), but also oriented toward the future (as a capacity to imagine alternative possibilities and toward the present (as a capacity to contextualise past habits and future projects with the contingencies of the moment)" (p. 963).

Viewing the agentic dimension within a chronosystem, as understood by Bronfenbrenner (1999), Emirbayer and Mische (1998) argue that it is the only way to capture its complexity. Moreover, they sustain that "these structural contexts of action are themselves temporal as well as relational fields – multiple, overlapping *ways of ordering time* toward which social actors can assume different simultaneous agentic orientations" (pp. 963-964, italics in original). The authors refer to these three temporal dimensions as the iterational, the projective and the practical-evaluative dimensions, respectively.

The *iterational* dimension of agency refers to the selective reactivation of routinized patterns of thought and action in order to give stability and order and help maintain identities, interactions and institutions over time. This implies that agency relies on the

memory of past actions, achievements and failures. In illustrating the projective dimension of their concept of agency, the authors acknowledge that agency is driven by some form of motivation that is intended to generate a future situation that is different from both the present and the past. This process refers to the *projective* dimension of agency which "encompasses the imaginative generation by actors of possible future trajectories of action, in which received structures of thought and action may be creatively reconfigured in relation to actors' hopes, fears, and desires for the future" (Emirbayer & Mische, 1998, p. 971). As Biesta and Tedder (2007) outline, when taking into account the uncertainties characterising modern societies, maintaining stability over time requires a substantial amount of effort. In this case, agency in terms of orientation and action is not projected towards creating change but towards preserving the present situation into the future. The *practical-evaluative* dimension refers to the present. This involves "the capacity of actors to make practical and normative judgements among alternative possible trajectories of action, in response to the emerging demands, dilemmas, and ambiguities of presently evolving situations" (p. 971).

When taking action, all three dimensions are at play. However, their contribution varies as the need arises. For this reason, Emirbayer and Mische (1998) call their definition a "chordal triad of agency within which all three dimensions resonate as separate but not always harmonious tones" (p. 972). As a result, they propose the following definition to human agency:

> "the temporally constructed engagement by actors of different structural environments – the temporal relational contexts of action – which, through the interplay of habit, imagination, and judgement, both reproduces and transforms those structures in interactive response to the problems posed by changing historical situations" (p. 970).

2.5.4 Biesta and Tedder's agency-as-achievement

Inspired by Emirbayer and Mische's work, Biesta, et al. (2015) in conceptualising teacher agency shift their attention from agency as a phenomenon in itself to "how agency is achieved in concrete settings and in and through particular *ecological* conditions and circumstances" (p. 626, italics in original). This view, they add, "has its roots in action-theoretical approaches, particularly those stemming from pragmatist philosophy (Dewey, Mead) where agency is concerned with the way in which actors 'critically shape their responses to problematic situations' (Biesta & Tedder 2006, p. 11)" (p. 626).

In both the chordal triad of agency and within this perspective, agency is not viewed as an individual capacity, nor a form of power to which individuals can resort in any given situation. Agency is neither a resource nor a quality residing in individuals. The environment is not simply an arena where agency takes place. On the other hand, agency is thought of as "an emergent phenomenon of actor-situation transaction" (Biesta et al., 2015, p. 626). It is "something that has to be achieved in and through engagement with particular temporal-relational contexts-for-action" (Biesta & Tedder, 2007, p. 136).

This entirely reflects Bronfenbrenner's ecological model in which the interplay among the different systems and the individual are influenced by time, transitions and socio-historical conditions. In this sense agency is also action, as Berthoz (2003) defined it: it is a goal-oriented intention to interact purposefully with the world or with oneself as part of the world. Conceiving agency-as-achievement, Biesta and Tedder (2007) outline that "the achievement of agency will always result from the interplay of individual efforts, available resources and contextual and structural 'factors' as they come together in particular and, in a sense, always unique situations" (p. 137). In addition, they suggest that from a methodological viewpoint, the adoption of an ecological approach to exploring agency would hence focus the attention on the unique configurations of such factors. On the basis of these reflections, Biesta et al. (2015) proposed the following model (Figure 2.2,overleaf) to guide research.
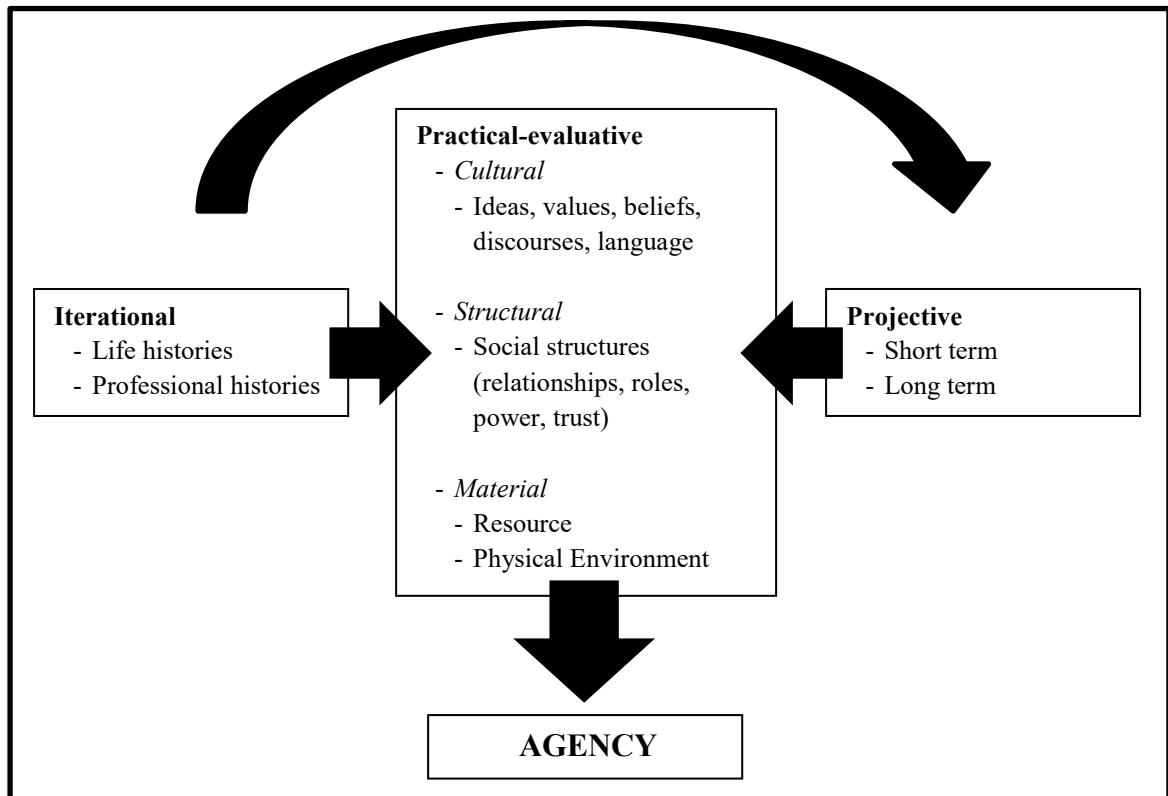
Figure 2.2: A model for understanding the achievement of agency (Source: Biesta et al., 2015)

2.6 Psychological Perspectives on Agency

Among the emerging theories in educational research stemming from psychology are the Social Cognitive Theory (SCT) (Bandura, 1986) and the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), which provided the foundations for the Theory of Planned Behaviour (TPB) (Ajzen, 1988; 1991) and the Integrative Model for Behavioural Prediction (IMBP) (Fishbein, 2009).

Although this thesis was informed by the concepts and constructs comprising the TPB, a brief description of these four theories will be provided. This is because, although each of them is comprehensive in its own right, they share a number of common denominators which sustain the link between structures of society and human agency. As a result, they provide valid explanations regarding the underlying processes of action as well as models that can guide research further.

One fundamental aspect that links these theories together is that they are all rooted in an agentic-ecological perspective; that is, they acknowledge that action (human intentions and behaviour) are a function of both the person and the environment with recursive relationships among these two dimensions as well as behaviour. Secondly, "people function as anticipative, purposive and self-evaluating proactive regulators of their motivation and actions" (Bandura & Locke, 2003, p. 87) as strongly sustained by Berthoz and the sociological theories outlined earlier in this chapter. Therefore agency is not considered as a capacity or competence, but as "integrated courses of action" (Bandura, 1982, p. 122) that are generated from a "configuration of influences from the *past*, orientations towards the *future* and engagement with the *present*" (Biesta et al., 2015, p. 626; italics in original).

2.6.1 Social Cognitive Theory

According to Bandura (2001), an agent is he/she who makes things happen intentionally through his/her actions. In agreement with the sociological theorists outlined earlier (Emirbayer & Mische, 1998; Biesta & Tedder, 2007), for Bandura agency is not a discrete entity residing in the individual. Agency "embodies the endowments, belief systems, self-regulatory capabilities and distributed structures and functions through which personal influence is exercised" (Bandura, 2001, p. 2). Moreover, Bandura attributes people's self-development, adaptation and self-renewal to the core features of agency, affirming that individuals are actively engaged with the environment and not simply passive observers.

Therefore, the underpinning hypothesis of SCT is that there is a triadic dynamic interplay between the environment (structure), the individual (agent) and the behaviour (outcomes). In this view, "persons are neither autonomous agents nor simply mechanical conveyers of animating environmental influences[…]" and "[a]ny account of the determinants of human action must […] include self-generated influences as a contributing factor" (Bandura, 1989, p. 1175). Bandura, thus acknowledges and sustains the position of cognitive neuroscientists, as Berthoz (2003), that the "human mind is

generative, creative, proactive, and reflective, not just reactive" (Bandura, 2001, p. 4). In this sense, agentic action is not simply an exposure to the environment. It is the emerging result of the symbolic, social, physical (inter)action with the social and physical structures people choose to belong to and construct. Hence, he conceptualises human agency as emergent interactive agency as opposed to other perspectives which perceived agency as autonomous or mechanical, devoid of any causal relationship (Bandura, 1989). In his view,

> "[t]houghts are not disembodied, immaterial entities that exist apart from neural events. Cognitive processes are emergent brain activities that exert determinative influence. Emergent properties differ qualitatively from their constituent elements and therefore are not reducible to them. [...] Through their interactive effects they are transformed into new phenomena" (Bandura, 2001, p. 4).

Bandura (2001) identifies four core features of human agency: intentionality, forethought, self-reactiveness and self-reflectiveness. The following paragraphs provide a brief overview of Bandura's reflections on each of the features in his work published in 2001, *Social Cognitive Theory: An Agentic Perspective*, unless otherwise stated.

INTENTIONALITY

In Bandura's view, intentions are simulations at cognitive level of future courses of action to be performed. They represent a proactive commitment to put actions into practice and so they are not merely predictions or expectations of future actions. He distinguishes intentions from actions, affirming that although they are functional to each other, they are separated by time. The outcomes, or acts, as Berthoz (2003) defines them, are the consequence of intentions and actions. However, Bandura points out that at times actions do not produce the intended or desired effects and hence personal agency refers to "the power to originate actions for given purposes" (p. 6) irrespective of the outcome. He also takes into account the complexity brought about when having to reach a common goal that requires a group effort. In this case, the challenge lies in the ability of harmoniously fusing together the intentions of each agent.

F ORETHOUGHT

A number of analogous positions with Berthoz's propositions (2003, 2012) emerge in Bandura's explanation of forethought. First of all, they both affirm that people "*anticipate* the possible consequences of prospective actions, and *select* and *create* courses of action likely to produce desired outcomes and avoid detrimental ones" (p. 7, italicised words refer to connections with Berthoz's simplex properties and principles). Bandura posits that forethought guides actions and reorders people's priorities with the aim of providing direction, coherence and meaning to one's life. The influence of future events on motivation driving present intentions and actions is only possible because they are represented in the present on a cognitive level. Hence action is also guided by anticipated outcomes and projected goals. This reflects Berthoz's (2003, 2012) view that the brain is a simulator and emulator of action; a generator of hypotheses. Moreover, they both acknowledge that, on the basis of the principle of refusal, people normally discard those courses of action that may lead to unrewarding outcomes. Indeed, according to Bandura, foresightful behaviour

> "enables people to transcend the dictates of their immediate environment and to shape and regulate the present to fit a desired future. In regulating their behaviour by outcome expectations, people adopt courses of action that are likely to produce positive outcomes" (2001, p.7).

Outcome expectations are constructed on the basis of people's observation of the effects specific actions produce on their 'world' (*umwelt*) and vice versa. Luckily however, as Bandura highlights, intentions and action are not only determined by reinforcement or punishment, as operant conditioning suggests. People are able to direct themselves when faced with competing influences on the basis of their personal standards and self-evaluative outcomes.

S ELF-REACTIVENESS

This core feature refers to the agent as a motivator and self-regulator of executed actions. According to Bandura, humans are endowed with self-referent subfunctions,

such as self-monitoring and performance self-guidance, to monitor and to regulate courses of action and the environmental conditions. Moreover, they create self-incentives to sustain their efforts to reach the intended goals. In other words, in line with Berthoz's (2003) view of the function of emotions on actions, individuals do the things that give them self-satisfaction and a sense of pride and self-worth. While challenging distal goals generate interest and determination, proximal subgoals "mobilise self-influences and direct what one does in the here and now" (2001, p. 8).

SELF-REFLECTIVENESS

Bandura poses fundamental importance on the ability of humans to reflect on their actions, balance efforts and outcomes, and "evaluate their motivation, values, and the meaning of their life pursuits" (2001, p. 10). These cognitive processes impinge directly on the choices people make, if it is worth undertaking a new pursuit and whether it is worth persevering or changing direction in the face of unanticipated challenges emerging throughout the course of action. According to Bandura, "the likelihood that people will act on the outcomes they expect prospective performances to produce depends on their beliefs about whether or not they can produce those performances" (2001, p. 10). Efficacy beliefs are thus fundamental for human agency and "occupy a pivotal role in the causal structure of social cognitive theory because [these] affect adaptation and change not only in their own right, but through their impact on other determinants" (2001, p.10).

2.6.1.1 The construct of self-efficacy

In his previous works on SCT and the role of self-efficacy mechanism in human agency, Bandura (1982) posits that this construct may have wide explanatory power to account for diverse phenomena such as changes in self-regulation of deviant behaviour, level of physiological stress reactions, resignation to and acceptance of failure, persistence in reaching goals, and growth of intrinsic interest. He provides supporting evidence on the effect of self-efficacy on competence, claiming that self-referent thought mediates the relationship between knowledge and action since "efficacy in dealing with one's environment is not a fixed act or simply a matter of knowing what to

do" (p. 122). Instead, it entails "a generative capability in which component cognitive, social and behavioural skills must be organised into integrated courses of action to serve innumerable purposes" (p. 122). In addition, self-percepts of efficacy act as regulators of human functioning through cognitive, motivational, affective, and decisional/selection processes (Bandura, 1989).

Hence, self-efficacy does not depend on the competencies one possesses, but "what you believe you can do with what you have under a variety of circumstances" (Bandura, 1986, p. 37). This self-referent judgement, whether precise or inaccurate, depends on four principal sources of information: "performance attainments, vicarious experiences of observing the performances of others, verbal persuasion and allied types of social influences that one possesses certain capabilities, and psychological states from which people partly judge their capability, strength and vulnerability" (Bandura, 1982, p. 126).

PERFORMANCE ATTAINMENTS

This source of information is considered as the most influential because it can be based on first-hand experience an individual masters. Meeting expected outcomes or reaching desired goals increase perceived levels of self-efficacy. In his research on the influence of percepts of self-efficacy, Bandura (1982) affirmed that success in enactive mastery of gradually more threatening activities increased perceived self-efficacy. On the other hand repeated failures, especially at the beginning of the course of action, lower them. He reached the conclusion, however, "that self-percepts of efficacy may exceed, match, or remain below enactive attainments, depending on how they are appraised" (p. 124). This is due to the fact that "people are influenced more by how they read their performance successes than by the successes per se" (p. 125).

VICARIOUS EXPERIENCES

In Bandura's view, people's beliefs about their levels of efficacy can also be influenced by observing other people's successes if they think they possess the same capabilities, skills and resources. Naturally, if the observers feel they do not have the same competencies or see that the people fail despite their effort, then their levels of efficacy will be lowered. This explains the importance 'models' have in people's lives.

Looking up to someone who is successful entices the individual to try harder as these help in predicting future outcomes of particular actions.

VERBAL PERSUASION

The power of persuasion has always been considered a driving force to action. Words of encouragement or conviction have helped people overcome the toughest of obstacles. Making people believe in their abilities, that 'they can do it' increases self-efficacy. However, as Bandura explains, the appraisal and its source need to be realistic and reliable, respectively.

PHYSIOLOGICAL STATES

These refer to the visceral states. People tend to expect success when they feel good about themselves and towards a particular situation. When they are tense or agitated, they are not able to give their best performance. In cases where the activity they are involved in requires physical strength, feelings of weakness, fatigue, aches and pains dishearten them, leading to physical inefficacy.

Bandura extends his reflection to other forms of efficacy such as collective self-efficacy. He states that this is another important predictor of action. In this case, people are thought of as part of a social system whose strength lies also in the belief of their conjoint capability that together they can reach a common goal. The sources of information outlined above naturally influence collective efficacy in the same way as self-percepts of efficacy. Examples of this include initiatives through the social media which have a substantial impact on urgent global problems and emergency crisis.

2.6.1.2 Teacher self-efficacy

The widespread studies of the construct of self-efficacy in educational research led to the development of the construct of teacher self-efficacy. Within this construct, both the teachers' self percepts of efficacy and outcome expectancy are considered. As a result, it encompasses two components: general teacher self-efficacy (GTE) which refers to a teacher's belief that external (environmental) influences can be controlled by good

teaching and personal teacher self-efficacy (PTE), which refers to a teacher's belief in his/her ability to bring about change in a student (Gibson & Dembo, 1984).

As self-efficacy, teacher self-efficacy is a context-specific construct (Bandura, 1982; Tschannen-Moran & Woolfolk Hoy, 2001) and may well vary across participants (Ross, Cousins & Gadalla, 1996) and student groups (Raudenbuch, Rowen & Cheong, 1992). For this reason, literature suggests that teacher self-efficacy should be measured in relation to specific teaching tasks in contextual classrooms (Tschannen-Moran & Woolfolk Hoy, 2001) such as the ability to plan inclusive activities or manage classroom behaviour (Pace & Aiello, 2016). Evidence that self and teacher self-efficacy are stable and vital indicators of various actions linked to effective inclusive education is provided in the thorough literature review conducted by Tschannen-Moran, Woolfolk Hoy and Hoy in 1998 who propose an integrated model which "weaves together both conceptual strands […] and new areas for research" (p. 227). Similar to Gibson & Dembo's (1984) GTE and PTE, two dimensions are identified: analysis of teaching task and assessment of personal teaching competence. Figure 2.3, below, illustrates the cyclical nature of teacher self-efficacy as theorised by Tschannen-Moran et al. (1998, p. 228).
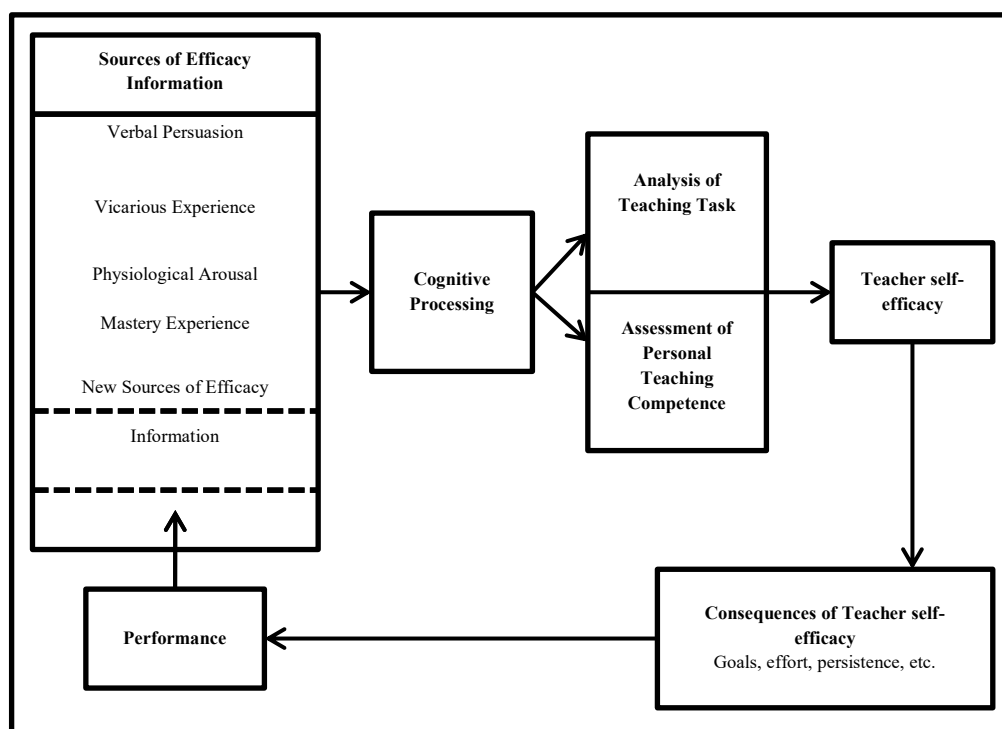
Figure 2.3: The cyclical nature of teacher self-efficacy (Tschannen-Moran et al., 1998, p. 228 in Pace & Aiello, 2016, p. 143)

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2.6.2 The Theory of Reasoned Action

The TRA was proposed by Fishbein and Ajzen in the 70s and formed the basis for the development of two other theories, namely the Theory of Planned Behaviour (TPB) (Ajzen, 1988, 1991) and the Integrative Model for Behavioural Prediction (IMBP) (Fishbein, 2003; 2009). All depart from the same assumption that behaviour is primarily the result of a person's intention to perform a given action. Intentions are, in turn, preceded by information or beliefs about the likelihood that the behaviour performed would lead to a specific outcome. This assumption leads to the acknowledgment that humans are considered as rational beings that systematise the information available before choosing a course of action, and that people evaluate the outcome and impact of their actions before deciding whether to engage in certain behaviours. Such a hypothesis is very much in line not only with Bandura's SCT (1986) but also Berthoz's view of action.

As illustrated by Madden, Ellen and Ajzen (1992), in the TRA a distinction is made between two types of beliefs: behavioural and normative. The behavioural beliefs are considered to be the underlying influence on an individual's attitude towards performing a behaviour. The attitude, in this case, is understood as the extent to which the person feels positively or negatively about personally performing the behaviour in question. The normative beliefs are postulated to be the underpinning influence of an individual's subjective norm about the behaviour. This refers to the extent to which the person perceives that their significant others acknowledge that behaviour. This implies that the information which a person considers most relevant with regards to a particular situation will affect intentions and, as a result, the behaviour. Other variables that are external to the model, such as gender, age, or culture are assumed to be at the basis of either attitudes or subjective norms. Furthermore, three conditions that can affect the magnitude of the relationship between intentions and behavior were identified:

> "(a) the degree to which the measure of intention and the behavioural criterion correspond with respect to their levels of specificity, (b) the stability of intentions between time of

measurement and performance of the behaviour, and (c) the degree
to which carrying out the intention is under the volitional control of
the individual" (Madden, Ellen & Ajzen, 1992, p . 3).

This latter condition limited the application of the TRA only to those behaviours that a person has the intention of doing on his/her own free will. In fact, following the application of this theory, it became evident that a key variable was missing.

2.6.3 The Theory of Planned Behaviour

The Theory of Planned Behaviour has become one of the most influential models adopted to predict human social behaviour and the meta-analytic syntheses conducted over the years have supported its validity (Ajzen, 2011; Armitage & Conner, 2001). Ajzen (1988) proposed that besides *attitudes towards a behaviour* and *subjective norm*, which were retained from the TRA model, intentional behaviour and behaviour itself are also a function of *perceived behaviour control*. The first key antecedent of human intention and behaviour is *attitude toward the behaviour*. It is hypothesised that the more positive the attitude toward a particular behaviour is, the stronger the intentions to perform that behaviour are. Personal in nature, attitude encompasses "the individual's global positive or negative evaluations of performing a particular behaviour" (Armitage & Conner, 2001, p. 474). Ajzen (1988) defined this hypothetical construct as "a disposition to respond favourably or unfavourably to an object, person, institution, or event" (Ajzen, 1988 p. 4), which is more malleable in nature than personality traits.

Since attitude is not easily accessible to direct observation, this construct must be inferred from measurable verbal and non-verbal responses that Ajzen (1988) categorised in three sub-groups: cognition, affect and conation (Ajzen, 1988). Expressions of verbal responses of cognitive nature refer to beliefs, convictions and prejudices. Affective verbal responses are linked to sentiments, prejudices and stereotypes. Examples of conative verbal responses include expressions of behavioural inclinations, intentions, commitments and behaviour towards a specific situation. Research on attitudes usually relies on this form of responses. This is due to the fact that

responses of a nonverbal kind, such as facial expressions and bodily reactions are more difficult to assess and the information they provide is usually more indirect (Ajzen, 1988).

Considered as the second predictor of behavioural intention, *subjective norm* refers to the influence society has on the individual. This is weighted by normative beliefs about the behaviour and the motivation to comply. This antecedent "refers to the individual's perceptions of general social pressure to perform (or not to perform) the behaviour" (Armitage & Conner, 2001, p. 474). The more individuals perceive that significant others approve of the behaviour, the more likely they are to behave in that manner, and vice versa.

Perceived Behavioural Control (PBC) is the additional variable that distinguishes TPB from TRA. This "deals with issues of control" (Ajzen, 2005, p. 117) and influences behaviour directly and indirectly via behavioural intention. This factor "provides information about the potential constraints on action as perceived by the actor, and is held to explain why intentions do not always predict behaviour" (Armitage & Conner, 2001, p. 472). Ajzen (1988) introduced this variable on the assumption that PBC "would allow prediction of behaviour that were not under volitional control" (Armitage & Conner, 2001, p. 472). In fact, the relative importance of these three conceptually independent factors on intentions and behaviour "may vary across behaviours and situations" (Ajzen, 1991, p. 188).

Ajzen (1991) associated PBC with the construct of self-efficacy, claiming that they can be considered compatible. However, Bandura (1992) held contrasting opinions, postulating that they are different concepts because self-efficacy focuses on cognitive internal control factors while PBC is more general and includes external factors. In their meta-analytic review on the TPB, Armitage and Conner (2001) found that "self-efficacy and PBC have a comparable level of correlation with both intention (both rs = .44) and behaviour (rs = .35) and .40, respectively)" (p. 483), thus concluding that "are both useful predictors" (p. 487) for the two variables. The authors added that "self-efficacy is more clearly defined and operationalized than is PBC (cf. Bandura, 1997), which

consists of mixed measures" (p. 487) and hence "may be the preferred measure of 'perceived control' within the TPB" (p. 488).

Underpinning the three antecedents to behavioural intention (Attitude toward Behaviour, Subjective Norm and PBC) are corresponding beliefs whose strength can determine whether an individual engages in behaviour or otherwise. Beliefs can be defined as the cognitive and mental component, expressing an individual's opinion which does not necessarily represent reality, but a subjective reality. The beliefs influencing Attitude toward Behaviour are beliefs about the outcome of the behaviour, those affecting Subjective Norm are normative beliefs, while control beliefs impinge on PBC. Ajzen (2005) further acknowledged that a series of background factors can influence an individual's beliefs. Figure 2.4, overleaf, illustrates Ajzen's TPB model (2005) applied to a teacher's possible reasoning behind the intention of adopting a method, such as Episodes of Situated Learning (ESL) (Rivoltella, 2015) in lesson planning, to promote inclusive education.

As outlined in Figure 2.4, Ajzen grouped these factors in three categories: personal characteristics, social and demographic variables, and past experience and exposure to other sources of information. Personal characteristics include general attitudes, personality traits, values, emotions and intelligence. Examples of social and demographic variables are age, gender, race, ethnicity, education, income and religion, while examples of sources of information refer to experience, knowledge and media exposure (Ajzen, 2005). Thus, the study of various combinations of predictor variables can be conceptualised within the TPB framework. Therefore, from the perspective of reasoned action, seven critical determinants of behaviour can be identified:

1. intention;
2. attitude;
3. norms;
4. self-efficacy or perceived behavioural control;
5. outcome expectations or behavioural beliefs;
6. normative beliefs;
7. control beliefs.
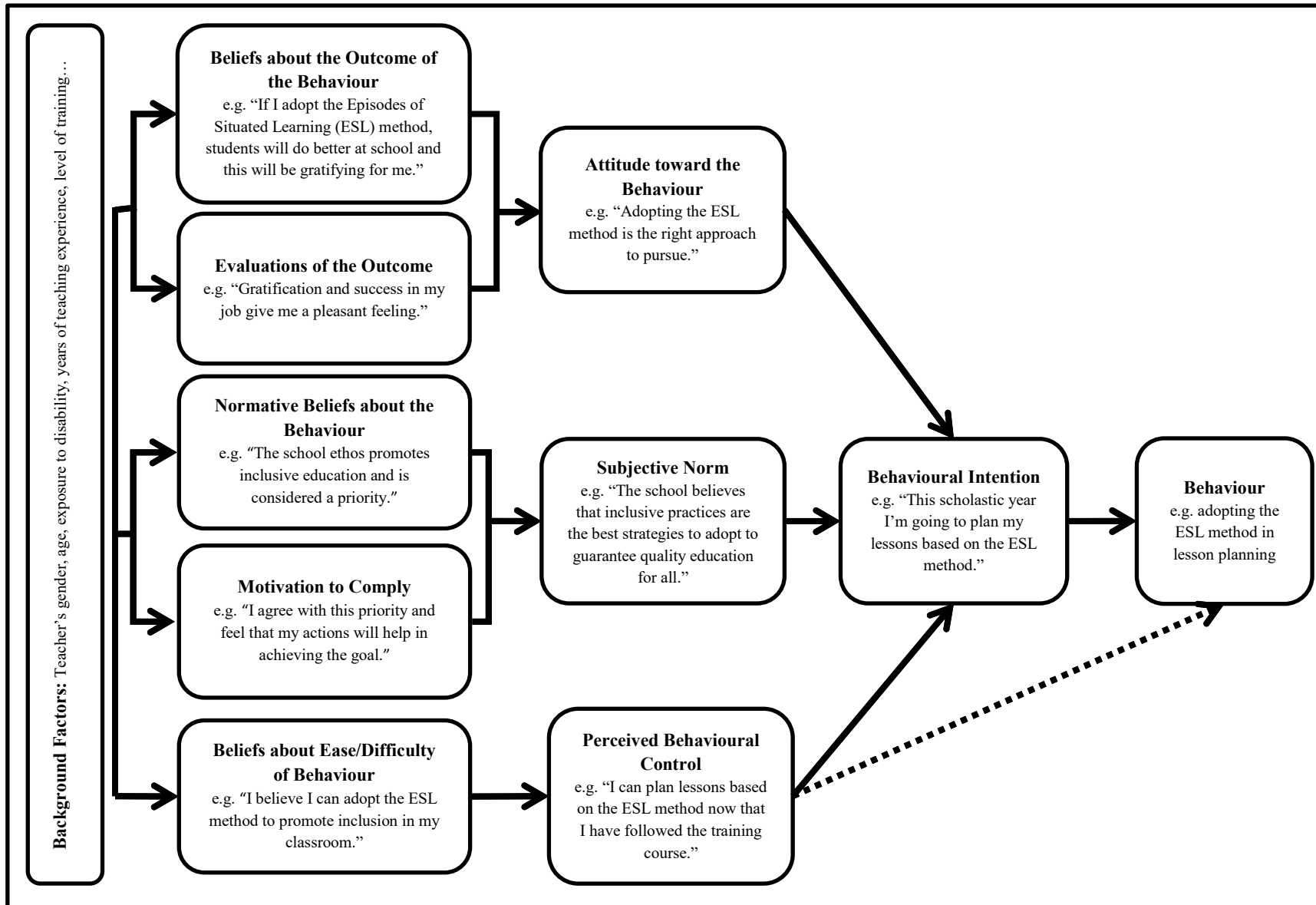
Figure 2.4: The TPB model in context (Source: Pace & Aiello, 2016, p. 146)

2.6.4 The Integrative Model for Behavioural Prediction

Fishbein's (2009) model for behavioural prediction starts from the hypothesis that intentions are the best predictors of behaviour. He affirms that empirical research has led to the acknowledgement that "specific behaviours can be predicted with considerable accuracy by appropriately accessing intentions to engage in the behaviours under consideration" (Fishbein, 2009, p. 219). In his view, intentions can be defined as a person's readiness or willingness to engage in a particular behaviour. Similarly to other psychological constructs, an array of indicators can be identified to study intentions. Such items include statements such as 'I will try to...', 'I intend to …' ' I am willing to…' and so on.

Contrary to the TPB model, IMBP takes into account the fact that intentions do not always predict behaviour. This refers to situations in which people may find themselves having the intention to do something but are unable to do so either because they do not have the necessary skills and abilities or due to environmental constraints. In other words, it hypothesises that "any given behaviour is most likely to occur if one has a strong intention to perform the behaviour, if a person has the necessary skills and abilities required to perform the behaviour, and if there are no environmental constraints preventing behavioural performance" (Fishbein & Yzer, 2003, p. 166)

On the other hand, if people do have the required structures to take action but do not have the intention to do so, the IM assumes that there are three determinants of intention. These are:

1. the attitude toward performing the behaviour;
2. normative influence or the amount of social pressure one feels vis-à-vis performing the behaviour;
3. one's sense of personal agency or self-efficacy with respect to performance of the behaviour (Fishbein, 2009).

Comparing figures 2.4 and 2.5 one can easily observe that on removing environmental factors and skills and abilities from the IMBP, very similar, if not the same, determinants can be traced. The same can be said for the relationships between antecedents of intention and behaviour. However, some slight, yet distinct differences do feature. Firstly, with regards to attitudes, Fishbein (2009) explains that one's attitude towards a behaviour "reflects his or her overall feeling of favourableness or unfavourableness toward personally performing the behaviour. [He also asserts that] the critical defining of attitude is its bipolar evaluative nature" (p. 221). Examples include 'Do I find performing this behaviour pleasant or unpleasant?' 'Do I like or dislike doing this particular behaviour?'
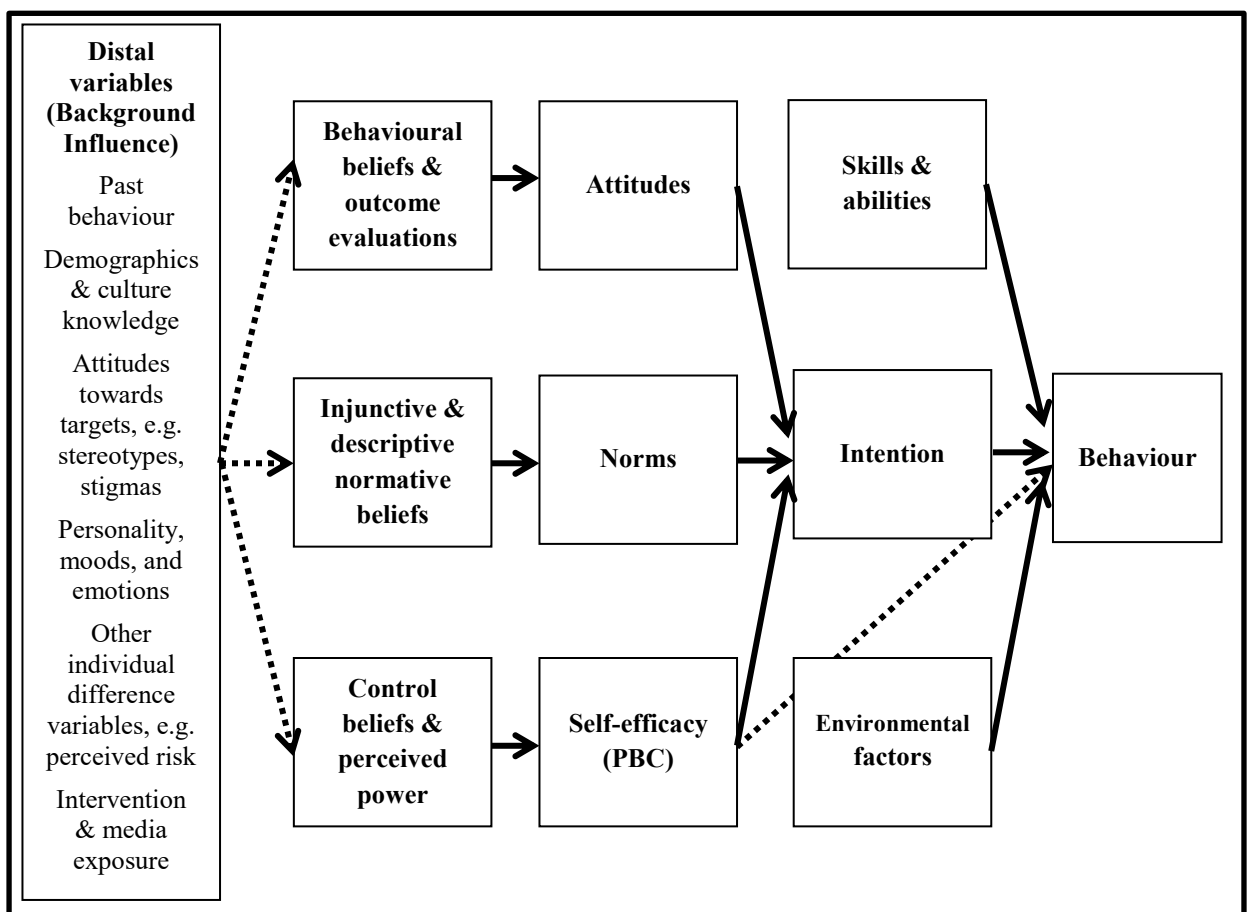
Figure 2.5:

The additional aspect to a reasoned action approach, whether it is SCT, TRA or TPB, is that people are not only influenced by normative descriptive beliefs but also by injunctive beliefs. "one's perception of the social norms or social pressure with respect to one's personally performing the behaviour in question is based on descriptive as well as upon

injunctive norms" (Fishbein, 2009, p. 221). This means that perceived normative pressure depends on both what other persons in their same situation are or aren't doing (*Injunctive* – 'I think that my colleagues are/aren't doing the same thing in this particular situation), and on the perception that the person has about the beliefs of significant others (*Descriptive* – 'I think that my colleagues would/wouldn't be happy if I did that').

As for the third variable, Fishbein perceives PBC and self-efficacy as the same exact constructs. Moreover, he interprets self-efficacy as a sense of personal agency which refers to "one's belief that one has the necessary skills and abilities to perform the behaviour, even under a number of difficult circumstances. Self-efficacy is perhaps best represented by the belief that, "if I really wanted to, I could perform the behaviour" (Fishbein, 2009, p. 222). It can be argued, therefore, that self-efficacy or personal agency is the function of both rational and emotional arousal; it implies willingness.

Fishbein (2009) stresses that despite the fact that these three psychosocial variables are very good predictors of intention and behaviour, the latter is highly dependent on the population and the behaviour being considered. Taking the example of implementing inclusive practices, one teacher may be influenced more by his/her attitude towards teaching or disability, while in another teacher percepts of self-efficacy prevail over descriptive and injunctive beliefs. In a similar manner, this behaviour may be more attitudinally driven in Italy where inclusion has been in force for more than 20 years than in another country where inclusive practices are still seen as sole responsibility of LSTs. In the first case, behaviour is primarily normatively and culturally driven, whereas in the latter case positive attitudes towards disability and the belief in the right to education for all are the primary triggers to action.

Thus, before trying to influence people's intentions, in this case teachers' intentions on implementing inclusive classroom practices, as Fishbein & Yzer (2009) suggest, it is important to "determine the degree to which that intention is under attitudinal, normative, or self-efficacy control in the population in question" (p. 167). It is of utmost importance to understand the behaviour from the perspective of the population under consideration by identifying the most relevant outcome, normative, and efficacy beliefs. This implies that

even at higher education/ teacher institution level, differentiation of programmes needs to be envisaged if they are to better equip teachers with the competencies necessary to face complexity in 21st century classrooms. Over and above the knowledge, skills and abilities, this model outlines all the other psychosocial and environmental variables that are at play.

In this sense, it can be said that the IMBP provides an initial model to guide teacher education planning aimed at competency acquisition. Furthermore, it can direct action research on the factors influencing teachers' intentions or willingness to implement inclusive practices as it provides an explanation as well as operational guidance on the areas to develop: knowledge skills and abilities, the three psychosocial variables (beliefs, efficacy and attitudes), and strategies to face or overcome environmental constraints. Underpinning these areas are the distal variables which should not be taken for granted as they are reflected in the underlying belief structure influencing behaviour indirectly. Moreover, as outlined in the various models rational thought also depends on emotions, which are not necessarily always rational. Meanwhile, for the purpose of this research, this model continues to affirm the position of most behaviour change theories that the three critical determinants of a person's intentions and behaviours are:

> "(a) the person's attitude toward performing the behaviour, which is based on one's beliefs about the positive and negative consequences (i.e., costs and benefits) of performing that behaviour; (b) perceived norms, which include the perception that those with whom the individual interacts most closely support the person's adoption of the behaviour and that others in the community are performing the behaviour; and (c) self-efficacy, which involves the person's perception that he or she can perform the behaviour under a variety of challenging circumstances (Fishbein & Yzer, 2003, p. 166).

2.7 Willingness as an Antecedent to Intentions and Behaviour

From the critical analysis of these theories one can conclude that to date, willingness has been used as a synonym of intentions and self-prediction. In fact, little research has

been carried out and the empirical data suggests that these are all indicants of the same underpinning disposition. However, Gibbons, Gerrard, Blanton and Russell (1998, in their analysis on willingness, suggested that a "measure of willingness is somehow capable of capturing nonintentional, reactive, and irrational influences on behaviour" (Fishbein, 2009, p. 220). Fishbein (2009) argues that this is quite strange as a claim when considering how willingness is measured. He further insists that, like other psychological constructs intentions can be assessed using multiple indicants, including willingness.

In the researcher's opinion, however, upon reflection on the various theories stemming from neuroscience, sociology and psychology, the concept of willingness deserves its due attention. This is because it implies disposition, receptiveness, cheerful compliance, eagerness and readiness. Willingness feeds on emotional and cognitive functions whereas intentional behaviour can also be automatic, stimulated by external variables such as praise or some form of reward. Willpower, in fact, is the determining variable in controlling oneself, in influencing one's actions and in avoiding the risk of relapse as time goes by. In other words, intentions and behaviour need to be wilful actions because will is the underpinning driving force for turning intentions into behaviour and persisting in sustaining such acts in the face of challenges. It gives added value to the action (intentions and behaviours) and the act (the final product). Hence, it can be considered as an overarching concept encompassing the rational and emotional thought impinging on intention and behaviour.

2.8 Empirical Data on the Principal Determinants Influencing Intention and Behaviour

In presenting the plethora of results provided in literature on a global and local level, the three principal determinants outlined as the strongest predictors will be used as a guide; attitudes towards performing the behaviour, self and teacher self-efficacy, and the subjective norm which comprises both injunctive and descriptive norms. The literature search concentrated specifically on studies which focused on measuring teachers' intentions, willingness, predispositions, and behaviours to adopt inclusive classroom practices. Since a good number of the studies included the correlation among these

proximal variables, presenting the data separately proved to be ineffective. The first section provides the data related to the Italian context, while the second provides some salient results from international contexts.

2.8.1 An overview of Italian studies

Studies regarding the Italian teacher population are still not very copious. Nevertheless, data on teachers' attitudes towards integration and inclusive education dates back to the 70s. Vianello in collaboration with various other researchers conducted both qualitative and quantitative research on teachers' attitudes. Given the terminology used within that period, the studies concentrated on attitudes towards mainstreaming and integration. The results presented in Vianello, Lanfranchi, Moalli & Pulina (2015, p. 18) outlined that:

- the type of disability (mental or physical disability) influenced teachers' opinions;
- students' behavioural problems and the level of disruption that these could cause were a major cause of concern;
- teachers' experiences and direct contact with students with a disability reduced the level of concerns when compared to teachers who had little or no experience. In this particular study all types of disability or special educational need except for students with socio-cultural disadvantage were included (Vianello, 1999 in Vianello et al., 2015).

Similar conclusions as to the ones reported above were also reached by Castellini, Mega and Vianello (1995; Mega, Castellini & Vianello, 1997, in Vianello et al., 2015) using the *Attitude towards Mainstreaming Scale* (ATMS) (Larrivee & Cook, 1979). They found that more direct contact with children with disability reduces concerns. Moreover, differences in attitudes were also recorded between generalist teachers and LSTs, with the latter having a more positive attitude towards the disability. Another important distinction was made between those teaching in nursery and primary schools (generalist teachers) and the specialist teachers working in lower secondary schools. In this case the former group had a more positive attitude. A plausible reason for this could be the variation in the type of teacher preparation that differs between the two groups (see section 1.4.2, p. 27). These results were also confirmed by Balboni and Pedrabissi (2000), in a research involving 678

teachers. In their study they examined attitudes of generalist teachers and LSTs towards the inclusion of students with mental retardation and concluded that the LSTs "were the most favourable, that school teachers with inclusion experience had a more positive attitude and, compared with teachers without such experience, were not negatively affected by age and years of service" (p. 148). Two years earlier Cornoldi, Terreni, Scruggs and Mastropieri (1998) had conducted a similar investigation on the correlation between the teachers' age and attitudes, reaching the same conclusions. The researchers also noted "dissatisfaction with the time, training, personnel assistance, and other resources that were provided for inclusion programmes" (Pace & Aiello, 2016, p. 149).

As outlined by Aiello, Pace, Dimitrov & Sibilio (in press),

> "this highlights the need for support to and training of teachers teaching at higher levels of education, if inclusive practices are to be guaranteed throughout a child's years of compulsory schooling. In fact, according to the teachers involved in the various studies, the provision of professional development courses, resources, time and more cooperation between the LS and GE teachers are the main factors identified to facilitate the implementation of inclusive practices (Balboni e Pedrabissi, 2000; Cornoldi et al., 1998; Devecchi, Dettori, Doveston, Sedgwick & Jament, 2012; Vianello et al., 2015)."

A study that comprised a larger population sample conducted by Ianes, Demo & Zambotti (2010) yielded encouraging results regarding teachers' attitudes towards integration. More than 90% of the 3230 teachers and other professional figures surveyed in Northern Italy were found to have a positive attitude and high percepts of efficacy. This result supports the hypothesis that attitude and efficacy beliefs are positively correlated. Contemporarily the study funded by the Fondazione Giovanni Agnelli (2010), which involved 7700 beginning teachers in various regions in Italy, provided evidence that 76.5% of those interviewed had a high sense of efficacy and 91.6% believed that through

integration all children benefited. Moreover 90.5% agreed that integration[7] would help them to grow professionally.

As regards data on Italy from international studies, the TALIS (OECD, 2014a, 2014b) investigated the teachers' percepts of efficacy in relation to their feelings of job satisfaction and a number of demographic variables. Within the psychological theories based on reasoned action, job satisfaction could be considered as an attitude towards the job. Data from the second edition of the large-scale study conducted in 2013 (OECD, 2014a) showed that 87% of Italian teachers teaching in lower secondary schools believe in their ability to motivate students who do not show interest in school. Moreover, nearly all the teachers (98%) feel capable of orienting students to believe in their own capabilities to reach good results. Interestingly, the percentages for both items are over 10% higher than TALIS-countries average.

On a much smaller magnitude but tapping the same three main factors as the TALIS (instruction, classroom management and student engagement) Biasi, Domenici, Capobianco & Patrizi (2014) carried out a study using the *Teacher Self-Efficacy Scale* (TSES) by Tschannen Moran and Woolfolk Hoy (2001). The translated version was administered to collect data on the impact of a professional development course on ICT-oriented integrated teaching strategies on teacher self-efficacy. They found that the levels of self-efficacy among the 200 teachers employed in primary and secondary schools were quite high for all three factors of the TSES scale after the course.

The validation of internationally-used scales to be applied in Italian context have gained particular interest in recent years. The benefit of such approach is two-fold. First of all, having a set of validated tools allows the comparison of data among countries with similar or completely different socio-economic contexts, educational systems and so on. A number of multi-national studies, some of which will be presented hereafter, have been conducted.

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[7] In both studies the term integration was used but the items included in the questionnaires reflected inclusive principles. Moreover, considering the limited amount of literature regarding the Italian context, it was thought that these findings be included.

With its longstanding history of inclusive education, Italy could provide insightful data as regards cultural factors and teachers' experience in working in inclusive classrooms. Secondly, investigations could concentrate on the difference between geographical contexts in Italy as well as at different levels of schooling. To date, the translated scales available in Italian literature are the aforementioned TSES, the *Teacher self-efficacy to Implement Inclusive Practices Scale* (TEIP) (Sharma, Loreman and Forlin, 2012) and the *Sentiments, Attitudes, and Concerns towards Inclusive Education - Revised (SACIE-R) Scale* (Forlin et al., 2011). The latter two are of greater interest for this thesis since they are more specifically oriented on studying the predictors impinging on the adoption of inclusive behaviour in the classroom.

Two similar studies were reported in literature in 2016. Both used the SACIE-R scale to test its factorial structure, internal validity, reliability, and criterion validity within Italian contexts. The first study included a sample of 437 teachers participating in an in-service professional development course specifically targeted on inclusive education (Aiello et al., 2016a). The participants were either LSTs, generalist or specialist teachers teaching in all grades in the region of Campania. The second study was conducted in the Sicilian region and included 400 teachers attending a teacher education course (Murdaca, Oliva & Costa, 2016). Whereas in the latter case, the scale was deemed valid and reliable for its use in Italian contexts, the results from the confirmatory factor analysis conducted in the first research yielded slightly different results with regards to teachers' sentiments. In fact, they suggested splitting the *sentiments about engaging with people with disabilities* factor in *Discomfort in interacting with disabled people* (3 items) and *Fear of having disability* (2 items) (Aiello et al., 2016a). With regards to the results obtained Aiello et al. (2016a) found that in-service generalist and learning support teachers have high levels of efficacy and positive attitudes towards inclusive practices. Although no significant differences emerged for these two variables between primary and secondary school teachers, the former had higher levels of concern.

Data provided by Murdaca et al. (2016) showed high mean values for the sub-scale *Sentiments about engaging with people with disabilities* (3.47) and lower values for the sub-scales *Concerns about Inclusive Education* (2.64) and *Acceptance of learners with*

different support needs (1.89). Both studies acknowledged that further research should be conducted before considering generalisability of the data, as in both cases convenience samples were used. Furthermore, Murdaca et al. (2016) suggested that more heterogeneous groups need to be studied with the aim of widening the scale's applicability. In the same study, Aiello et al. (2016a) also used the TEIP scale to measure teachers' levels of efficacy in relation to inclusive instruction, managing behaviour and collaboration. Results indicated that the level of efficacy was high among the respondents and that there was a positive correlation between teacher self-efficacy and attitudes towards inclusive education among primary and lower secondary school teachers.

Another two studies conducted by Aiello et al. (in press) and Hecht, Aiello, Pace & Sibilio (in press) used both the TEIP and the SACIE-R scales. The first research aimed at investigating the differences, if any, between the students preparing to teach as generalist teachers in secondary schools and those preparing to teach as LSTs on the latent factors of efficacy, sentiments, attitudes, and concerns. Moreover, it sought to examine whether levels of teacher self-efficacy and attitudes changed with teaching experience. The sample was composed of two groups; 221 specialist student-teachers and 131 generalist and specialist teachers with varying levels of teaching experience. The results of this study revealed that LSTs had higher scores on all six factors than the generalist teachers. The authors assumed that this could be due to their interest in pursuing a career in special education and may have stronger beliefs in the success of inclusion (outcome expectancy beliefs). Teaching experience yielded a statistically significant negative relationship with attitudes ($p = .018$), which means that the more experience the teachers had, the lower were their scores on attitudes towards inclusive education.

The second research was a comparative study between Austria and Italy whose principal aims were to explore (a) the attitudes of secondary school student-teachers towards inclusive education and what is their perceived capability to teach in an inclusive setting; (b) whether there were any correlations with age or teaching experience and; (c) if there were similarities and differences between the two samples (Hecht, et al., in press). In both countries attitudes and teacher self-efficacy were above the theoretical mean. There was a slight negative correlation between age range and the subscale *Efficacy in Managing*

behaviour. The authors also reported a positive correlation between attitudes and efficacy to collaborate with colleagues and to implement inclusive instruction. Significant differences emerged between the Austrian and Italian samples which was assumed that it could derive from cultural factors.

2.8.2 International literature

Studies on an international level regarding attitudes towards performing inclusive classroom practices and self-efficacy have been plenty in that past 40 years or so. The sheer size and volume of this research effort is indicative of the importance researchers attribute to the latent variables influencing behaviour, therefore acknowledging that knowledge and skills are not sufficient to bring about change. The systematic literature review published by Avramidis and Norwich in 2002 included international studies conducted between 1984 and 2000. They identified three factors influencing attitudes: child-related, teacher-related and educational-environment related. They further categorised teacher-related variables into gender, age-teaching experience, grade level taught, experience of contact, training, teachers' beliefs and socio-political views. On the basis of their findings, they concluded that teachers,

> "although positive towards the general philosophy of inclusive education, do not share a 'total inclusion' approach to special educational provision. Instead, they hold differing attitudes about school placements, based largely upon the nature of the students' disabilities. Teachers are more willing to include students with mild disabilities or physical/sensory impairments than students with more complex needs. In particular, there is enough evidence to suggest that, in the case of the more severe learning needs and behavioural difficulties, teachers hold negative attitudes to the implementation of inclusion" (Avramidis & Norwich, 2002, p.142).

Given the historical period the studies were conducted in, one might argue that there was surely more scepticism among teachers and probably they felt even more open to

speak about their position than they are today. However, a more recent systematic literature review (De Boer, Pijl & Minnaert, 2011) on primary school teachers' attitudes reached similar conclusions. Their results, which included 26 studies published between 1998 and 2008, showed that

> "the majority of teachers were undecided or negative in their beliefs about inclusive education and do not rate themselves as very knowledgeable about educating pupils with special needs. The six studies which examined teachers' feelings towards inclusive education showed that teachers did not feel competent and confident in teaching pupils with various types of special needs. Furthermore, studies regarding the behavioural component showed that teachers hold negative or neutral behavioural intentions towards pupils with special needs" (De Boer, et al., 2011, p. 343).

This is in contrast with the data collected in Italy using the SACIE-R scale, which reported positive attitudes among teachers (Murdaca, et al., 2016; Aiello, et al., 2016). On the other hand, similarly to the results previously reported concerning Italy (Vianello, et al., 2015; Cornoldi, et al., 1998; Balboni & Piedrabissi, 2000), De Boer et al. (2011) reached the conclusion that there seems to be a link between teachers' attitudes and the type of disability. Negative attitudes were associated with the inclusion of students with learning disabilities, ADHD and other behavioural problems. On the contrary, the inclusion of students with sensory impairment and/or physical disability is highly accepted.

As indicated in the review (De Boer, et al., 2011), in general, teachers have many concerns regarding their level of training and knowledge about educating students with special needs, they do not feel that they have the necessary competence and are not confident in teaching these students. As regards the years of teacher experience, there are contradictory results. De Boer et al. (2011) concluded that teachers with fewer years of experience hold more positive attitudes towards inclusive education than teachers who have many years of experience. In addition, they even affirmed that training plus experience leads to more positive attitudes than less experience and less training. These

were confirmed in other studies which evidenced that student-teachers have more positive attitudes than experienced teachers who had been teaching for more than 20 years (Burke & Sutherland, 2004). This is not supported by the work of many others who found that teachers who had had experience in teaching students with special educational needs generally had more positive attitudes toward inclusion (Ahmmed, Sharma & Deppeler, 2012; Avramidis & Kalyva, 2007; Malinen, Savolainen & Xu, 2012). This contact does not necessarily have to be with the students themselves, but could also be a friend or family member to generate positive attitudes (Boyle, Topping & & Jindal-Snape, 2013; Ahmmed et al., 2012). Moreover, conclusions reached by Sharma and Sokal (2015) in their qualitative study conducted in Canada may indicate that engaging in highly inclusive practices may lead to lower degrees of concerns and positive attitudes on inclusion.

Research results reported by Round, Subban and Sharma (2015) revealed that Victorian secondary school teachers felt that inclusive practices are an additional burden to their already heavy workload. A major concern was that the school would not have the adequate resources to support inclusive practices. Another study conducted in Australia (Forlin, Keen & Barrett, 2008) identified student-related (their behaviour) and teacher-related (their lack of competence) concerns impinging on teachers' attitudes, as Avramidis and Norwich had concluded in 2002. Interestingly, professional development did not reduce these concerns and more experienced teachers even expressed more concerns. Inversely, Sharma & Nuttal (2015) reported the positive effects of a university teacher training course on reducing concern ratings about (a) acceptance of students with a disability by others, (b) the impact of inclusive practices on academic standards, and (c) teachers' workloads.

In summary, however, it is important to highlight that there is unanimous agreement that teachers with positive attitudes tend to adopt inclusive practices more than teachers with apprehensive attitudes (Ahsan, Deppeler & Sharma; 2013; Sharma, Forlin & Loreman, 2008; Sharma, Moore & Sonawane, 2009). This, in turn, has an effect on classroom climate and students' performance and affect the teachers' commitment to implementing inclusive practices in the long term (Avramidis & Norwich, 2002; Putman, 2012). Hence, more research needs to be conducted on how positive attitudes can be produced and widespread among teachers. These studies have indicated a number of

solutions, even if in some cases there are contradicting conclusions regarding their effectiveness. Hence, as highlighted earlier, teacher education requires a level of personalisation, depending firstly on political social cultures and contexts and, secondly, taking into account personal beliefs, concerns, intentions, attitudes and levels of efficacy.

Research on teacher efficacy for inclusive education is relatively new (Forlin, Sharma, & Loreman, 2014). However, various studies looked into the relationship between teacher self-efficacy and attitudes towards inclusive education or its direct link to intentions and behaviour for inclusive practices. Research conducted affirmed that this variable:

- is one of the strongest predictors of teachers' positive attitudes towards inclusion. This implies that the higher the levels of teacher self-efficacy the more positive are their attitudes (Soodak, Podell & Lehmann, 1998; Weisel & Dror, 2006; Malinen et al., 2012; Savolainen, Engelbrecht, Nel, & Malinen, 2012; Sharma & Sokal, 2015; Sharma & Jacobs, 2016);

- is linked to willingness and openness to innovation (Guskey, 1988; Stein & Wang, 1988)

- increases the likelihood to implement effective methods of instruction to enhance student learning (Ashton & Webb, 1986; Bandura, 1997);

- helps teachers to cope with stressors and negative feelings (Bandura, 1997) leading to a lower inclination to refer a difficult student to special education (Meijer & Foster, 1988; Podell & Soodak, 1993) and persist when faced with low-performing students (Gibson & Dembo, 1984; Almog & Shechtman, 2007);

- in turn promotes students' percepts of self-efficacy, and enhances their motivation and participation (Ross, Hogaboam-Gray & Hannay, 2001).

Research on the variables impinging on teacher self-efficacy found that many of the distal variables identified in both the TPB and the IBPM are at play. In their four-country study (Australia, Canada, Hong Kong and India), Sharma, Loreman and Forlin (2012), concluded that substantial differences among countries are present with regards to teacher-efficacy. They claimed that this could be due to the type of training offered by the institution, the level of knowledge regarding legislation and policies on inclusion, and teaching experience and personal interaction with people with disabilities. Similar results

were reported in a research conducted among 194 Pakistani pre-service teachers (Sharma, Shaukat and Furlonger, 2014). Romi and Leyser (2006) confirmed that teacher education has a positive impact on teacher self-efficacy. With regards to teaching experience, research conducted by Putman (2012) demonstrated that experienced teachers held higher general and domain-specific teacher efficacy than preservice and novice teachers.

A study which was conducted by Malinen et al. (2013) using a sample of 1911 in-service teachers from China, Finland and South Africa provided strong evidence of the impact of culture and context on teacher self-efficacy especially with reference to the developing countries, but also in Finland. In addition, in their country-specific findings they highlighted differences between mainstream and learning support teachers on feelings of competence to manage behaviour in China, with the former feeling more competent. A final interesting result worth mentioning is that in the comparative research conducted between teachers from Australia and India (Sharma & Jacobs, 2016), the number of students in a classroom and the amount of resources available made no difference when teachers felt confident in consulting and collaborating with their colleagues. Moreover, they are more likely to feel positive about including students with a disability in their classroom. Similar results were also confirmed in a research conducted in Bangladesh (Ahmmed, Sharma & Deppeler, 2013). This highlights the importance of collaboration and calls for more research on collective efficacy and how both can be enhanced.

Teacher self-efficacy in using inclusive teaching strategies was also found to influence their intentions to change curriculum, confirming similar affirmations made by Ashton and Webb (1986) who argued that high levels of self-efficacy lead to changes in the way teachers teach. Finally, as the authors claim, efficacy in using inclusive instruction is definitely a factor that influences teachers' intentions to include all students, irrespective of their ability (Sharma & Jacobs, 2016).

2.9 Conclusions

This chapter aimed at presenting a critical overview of some of the emerging theories in educational research stemming from cognitive neuroscience, sociology and psychology

rooted in an ecological-agentic perspective. The choice of the theories presented was focused on those which reflect the epistemological position of the researcher and have inspired the research on the identification of variables influencing teachers' willingness to implement inclusive classroom practices. Although all the theories are comprehensive in their own right, each of them brought additional insight on the complexity of human agency and more specifically on teacher agency.

On the basis of these reflections, it becomes all the more evident that the variables at play are plenty, they are intricately interwoven, and their measurement is not always so straightforward. Moreover, although behaviour cannot be predicted without any doubt, there is by now ample evidence that, investigated together, the three antecedents (attitudes, efficacy and perceived norms) are strong predictors of intentions and behaviour. Nevertheless, providing overarching generalizable conclusions on the variables impacting behaviour in inclusive practices is still imprudent due to the lack of a shared understanding of inclusion between and within countries, dissimilarities in educational systems and socio-political contexts, and the variations in methodologies and data-collection tools used.

3. Research Methodology

Knowing is not enough; we must apply.
Willing is not enough; we must do. (Goethe)

3.1 Research Design and Methodology

This chapter presents an account of the study conducted as part of this research. The background framework, research questions, methodology, sample, choice and design of the research tools, the data collection procedure and the data analysis will be described, making reference to relevant literature which proved useful to guide the decisions taken.

3.1.1 Framing the research

The attention on the variables influencing teachers' willingness to implement inclusive classroom practices stemmed from the researcher's particular interest in the theories on cognitive and affective decision-making processes underpinning agency. The researcher's teaching experience in inclusive contexts and her studies on adult and lifelong education led to concentrate on teacher professionalism as an area of research. This decision was sustained by the international widespread acknowledgement[8] that "successful implementation of inclusion reforms depends largely on the goodwill of educators" [EC, 2015, p.773] because "without a human vehicle, the structural, organisational and resource provisions are of little or no use" (Kuyini & Desai, n.d., p. 6). Indeed, teachers can be considered as the main catalysts without whose approval no policy, philosophy or strategy can be translated into action. These reflections led to the identification of the topic and object of the study.

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[8] For example, documents from international organisations such as EADSNE, 2009, 2010, 2012, OECD, 2015, UNESCO, 2008, and WHO, 2011, international literature such as Avramidis and Norwich, 2002, and Putman, 2012, as well as Italian literature to include Aiello, 2015; Chiapetta Caiola and Ciraci, 2013; Ianes, 2005; Pavone, 2014; Sibilio, 2014, and Vianello et al., 2015.

The plethora of international studies on teachers' beliefs, attitudes, efficacy, concerns, sentiments, and the possible correlations among these and other variables impinging on agency provided the motivation to study in further detail the theoretical frameworks that could guide the research. Among the theories which were mostly cited were the SCT, mainly for its self-efficacy construct, and the TPB that offers a more comprehensive theoretical framework, encompassing attitudes, efficacy and normative beliefs. A few others made reference to agency and suggested sociological interconnections. The choice of an ecological perspective was an indisputable option considering the recognition in human and social science research that there are multiple levels of influence which need to be taken into account when studying educational phenomena. The concept of agency provided the connection between cognitive neuroscience, sociology and philosophy. As a result, the literature review was aimed at gathering information regarding three specific aspects:

1. policies regarding inclusive education, student competencies and teacher competencies to critically analyse the contextual background and the demands teachers need to address in 21st century classrooms (chapter 1);
2. theories and models that could underpin the search for such variables and their levels of influence, as well as results from past studies conducted using these models (chapter 2);
3. the tried and tested theories, methodologies, techniques and tools to investigate the factors impinging on teachers' willingness to implement inclusive classroom practices (this chapter).

3.1.2 Theoretical framework

The TPB was considered to be the most suitable structure to form the basis of this research. Although the IMBP can be considered as more comprehensive due to its acknowledgement of the direct influence of environmental factors and skills and abilities,

the TPB has already been explored (Ahmmed et al., 2013[9]; Ahsan et al., 2013[10]; Kuyini & Desai, 2007[11]; Sharma & Jacobs, 2016[12]) as a solution to overrule the founded critique that attitudes alone do not predict behaviour. As outlined in the second chapter, the TPB is a revisited model of the TRA which were both based on the premise, together with IMBP, that between one's attitude and behaviour stood a mediating variable which was even more predictive of behaviour: intention. In 1988, Ajzen proposed that besides *attitude toward the behaviour* and *subjective norms to performance of the behaviour*, which were retained from the former TRA model, intentional behaviour and behaviour itself are also a function of *PBC*. Applied specifically to this context this means that a teacher's intention to adopt a teaching strategy which is aimed at including a student with additional needs depends on these three factors. Underpinning each of these three factors are other factors related to the teacher's beliefs about the outcome of the behaviour and the expected outcomes, normative beliefs about the behaviour and motivation to comply, and efficacy beliefs (see Figure 2.4, p. 57).

Four scales were identified to measure these variables. These were the Attitudes towards Inclusion Scale (AIS) (Sharma & Jacobs, 2016), the Teacher self-efficacy for Inclusive Practices Scale (TEIP) (Sharma et al. 2012), and the Concerns about Inclusive

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[9] Ahmmed et al. (2013) adopted the TPB framework to investigate the influence of teacher attitudes (attitudes), perceived school support (subjective norms) and inclusive teacher efficacy (PBC) on the intentions of 738 in-service teachers to include students with disabilities in Bangladesh. In this study the authors concluded that these three variables explained 40% of the variance in teachers' intentions to include students with a disability in regular classrooms. Moreover, they found that perceived school support was the strongest predictor variable influencing teachers' intentions, more than attitudes, teacher self-efficacy, teachers' age and teaching experience.

[10] On the basis of the TPB framework, Ahsan et al. (2013) conducted a study among 1623 pre-service teachers from 16 teacher education institutions. They measured attitudes and teacher efficacy using the SACIE and the TEIP scales.

[11] Kuyini & Desai (2007) carried out a study in Ghana with a total of 128 respondents (108 classroom teachers and 20 school principals) using the TPB as an underpinning framework. They investigated educators' attitudes towards including students with disabilities, educators' knowledge of inclusive education practices, and principals' expectations, representing the proximal variables of attitudes, perceived control and subjective norms respectively.

[12] Sharma & Jacobs (2016) used the TPB framework to explore educators' intentions to teach in inclusive classrooms in India by measuring the teachers' attitudes, teacher self-efficacy, and intentions using a newly developed scale. The researchers claimed that since attitudes alone account for 15-20% of the variance in actual behavior, the intentions scale designed could improve predictability.

Education Scale (CIES) (Sharma & Desai, 2002). Whereas the former two scales specifically measure the variables identified by Ajzen (1988), namely *attitude toward the behaviour* and *PBC*, the CIES measures concerns rather than the *subjective norms to performance of the behaviour*. Despite the recognition that concerns towards inclusion may not be ideal to measure this variable directly, the items included in the scale tap on a number of issues related to teachers' normative beliefs about the behaviour and motivation to comply. This is because the items measure concerns regarding the acceptance of students with SEN by other students, the lack of administrative support, resources and remuneration, the possible increase in workload and the effects of inclusive practices on academic standards.

3.1.3 Methodologies, techniques and tools used in research on factors influencing inclusive practices

Literature searches of studies related to the research topic revealed that these mainly used multi-dimensional self-reporting questionnaires with 4 to 9-point Likert scales. A small number of studies have also integrated qualitative methods in their investigations, such as semi-structured interviews with teachers (Subban & Sharma, 2005), interviews with principals (Kuyini & Desai, 2007), ethnographic research (Biesta et al., 2015), and classroom observations (Sharma & Sokal, 2015). However, the use of scales is much more diffused despite the recommendations in the conclusive reflections of the articles that the triangulation of data may well provide in-depth explanations to the results obtained from the quantitative approaches. This prevalence towards quantitative methods could be due to the fact that most of the research stemmed from psychologically-directed inquiry and, as Fiorucci (2014) outlines, this is often an approach adopted to measure complex concepts that cannot be observed directly.

In his literature review, Fiorucci (2014) concentrated on giving an account of the measures used to investigate teachers' attitudes and provided quite a long list of scales, including also those measuring attitudes towards disability *per se*. In their article on teacher efficacy Tschannen-Moran et al. (1998) identified scales measuring teacher self-efficacy. The literature search carried out for this study identified those scales which were

specifically designed to investigate teacher-related factors that are predictive of willingness to implement inclusive practices. This led to the exclusion of those scales used to collect data from parents, students, heads of school and other stakeholders. The multiple meanings associated to inclusive education was not taken into consideration during the initial search. In fact, even those scales which used the term mainstreaming or integration rather than inclusion were taken into consideration. Considering the vast research in the area and the approach used to collect this data, the selection of the scales presented cannot be considered comprehensive. Table 3.1, overleaf, presents these scales in chronological order.

As outlined in chapter 2, the interest in attitudes towards disability and its influence on behaviour had already started in the 70s. In fact, 12 of the scales identified overleaf were designed to measure attitudes, while initial attempts to measure opinions (Larrivee & Cook, 1979; Semmel, Abernathy, Butera & Lesar, 1991; Antonak & Larrivee; Bender, Veil & Scott, 1995) were in fact aimed at measuring beliefs and opinions that could explain the teachers' attitudes towards the idea of shifting from a dual-track to a single-track educational system. Since 2000, new scales were designed to measure teacher efficacy (Tschannen-Moran & Woolfolk Hoy, 2001), concerns regarding inclusive education (Sharma & Desai, 2002), knowledge of inclusive education (Kuyini & Desai, 2007), perceived school support for inclusive education (Ahmmed et al., 2013) and intentions (Sharma & Jacobs, 2016).

With regards to the quality of these measures, the criteria to bear in mind include construct validity, brevity, internal consistency as a measure of reliability – high intercorrelations among items indicate they measure the same construct, unidimensionality and simplicity – in terms of ease of understanding and answering (Saloviita, 2015). Among the scales identified, only few meet all the requirements. Some include a large number of items, reaching even fifty. Hence, they wouldn't be appropriate to use in combination with other scales to be able to measure different dimensions as they would make the questionnaire too lengthy. As to the Cronbach's alpha, all had a value higher than .70. This shows that scale internal reliability is acceptable since below this value, the scales would

need to be used with care (DeVellis, 2003). The majority of the scales were not unidimensional while the characteristic of simplicity was generally maintained throughout.

Table 3.1: Scales used in measuring factors underpinning teacher behaviour towards inclusion (Source: adapted from Pace & Aiello, 2016).

Year	Authors	Scale	N. of Items	Reliability
1979	Larrivee & Cook	Opinions Relative to Mainstreaming (ORM)	30	α = .89
1980	Berryman & Neal	Attitudes Towards Mainstreaming Scale (ATMS)	18	α = .89
1982	Ashton, Olejnik, Crocker & McAuliffe	Ashton Vignettes	50	NA*
1991	Semmel et al.	Regular Education Initiative Teacher Survey (REITS)	27	α = .82
1992	Wilczenski	Attitudes Towards Inclusive Education Scale (ATIES)	16	α = .92
1995	Antonak & Larrivee	Opinions Relative to Integration of Students with Disabilities (ORI) [Revision of the ORM (Larrivee & Cook, 1979)]	30	α = .83
1995	Bender et al.	Mainstreaming Attitudes Survey (MAS)	NA	NA
1995	Sideridis & Chandler	Teacher Integration Attitudes Questionnaire (TIAQ)	12	α = .92
1997	Bandura	Bandura's Teacher Self-Efficacy Scale	30	NA
1998	Stoiber, Gettinger & Goez	My Thinking About Inclusion questionnaire - Short Form (MTAI-SF)	12	α = .80
1998	Stoiber, Gettinger & Goez	My Thinking About Inclusion questionnaire (MTAI)	28	α = .91
1998	Cochran	Scale of Teachers' Attitudes Toward Inclusive Classrooms (STATIC)	20	α = .89
2001	Tschannen-Moran & Woolfolk Hoy	Teacher Self Efficacy Scale [Translated into Italian and validated for Italian contexts by Biasi et al, 2014)]	12-24	α = .90
2002	Sharma & Desai	Concerns about Inclusive Education Scale (CIES) [Translated into Italian and is currently being validated by the authors]	21	α = .86

2004	Bailey	Teachers' Attitude toward Inclusion Scale (TATIS) (used by Sharma & Nuttal with teachers)	24	α = .91
2007	Alvarez Mchatton & McCray	Inclination Toward Inclusion (ATI)	22-28	α = .91
2007	Loreman, Earle, Sharma & Forlin	Sentiments, Attitudes, Concerns regarding Inclusive Education (SACIE)	19	missing
2007	Kuyini & Desai	Knowledge of Inclusive Education Scale (KIES)	16	α = .88
2008	Mahat	Multidimensional Attitudes toward Inclusive Education Scale (MATIES)	18	α = .91
2010	Cullen, Gregory & Noto	Teacher Attitude Toward Inclusion Scale	14	α = .82
2011	Forlin et al.	Sentiments, Attitudes, Concerns regarding Inclusive Education - Revised (SACIE-R) [Revision of the SACIE scale (Loreman et al., 2007)] [Translated into Italian and validated for Italian contexts (Aiello et al., 2016; Murdaca et al., 2016)]	15	α = .74
2012	Sharma et al.	Teacher self-efficacy for Inclusive Practice (TEIP) scale [Translated into Italian and validated for Italian contexts (Aiello et al., 2016)]	18	α = .89
2013	Ahmmed et al.	Perceived School Support for Inclusive Education (PSSIE)	8	NA
2015	Saloviita	Teachers' Attitudes towards Inclusive Education (TAIS)	10	α = .89
2016	Sharma & Jacobs	Attitudes towards Inclusion Scale (AIS) [Translated into Italian and already used in a comparative study between Italy and Australia]	10	missing
2016	Sharma & Jacobs	Intention to Teach in Inclusive Classrooms (ITICS) [Translated into Italian and already used in a comparative study between Italy and Australia]	7	missing

*Note: NA - access was limited to abstract or parts of document only; Missing - not reported in the article

The strategy adopted in this study was that of identifying already validated scales used in other countries that can be translated and adapted to the Italian context. The aim was two-fold. Firstly, considering the dearth of literature about factors influencing Italian

teachers' intentions and behaviour, the scope was to create a tool that could allow comparison with data already available from other countries. Secondly, to create the foundations for future comparative research among universities on an national level. Previously to this study, a number of studies were conducted using the SACIE-R and the TEIP scales by the research team at the Department of Humanities, Philosophy and Education at the University of Salerno in 2015 (Aiello et al., 2016a; Aiello et al. in press; Hecht et al, in press), but further work led to a collaboration with Prof. Sharma from Monash University, Australia, who gave the permission to use four scales to cover the three latent factors (attitudes, concerns, efficacy) and intentions.

3.2 Research Aims and Hypothesis

This research is a preliminary study that forms part of a much broader ongoing international project which aims at creating a set of validated qualitative and quantitative tools that can be used in different geographical and cultural contexts to allow comparison on an international level. The specific aims of this study were to:

- provide and pilot test the translated versions of the four scales identified to measure teachers' attitudes, concerns, self-efficacy and intentions towards the implementation of inclusive classroom practices;

- examine the respondents' levels of attitudes, concerns, self-efficacy and intentions towards the implementation of inclusive classroom practices;

- explore the differences in the way respondents answered based on the grade taught and years of teaching experience;

- determine which factors best predict the respondents' intentions to teach in inclusive classrooms.

As illustrated in figure 3.1, overleaf, the research hypothesis tested was that the more positive the teachers' attitudes towards inclusion and the higher the self-percepts of efficacy are, the more likely teachers are to adopt inclusive practices. With regards to concerns, which is the third predictor variable, it was hypothesised that the fewer the concerns the higher are teachers' intentions to implement inclusive practices. In addition,

in line with the TPB, it was hypothesised that studied together, these three variables would be more predictive of intentions than when taken singularly.
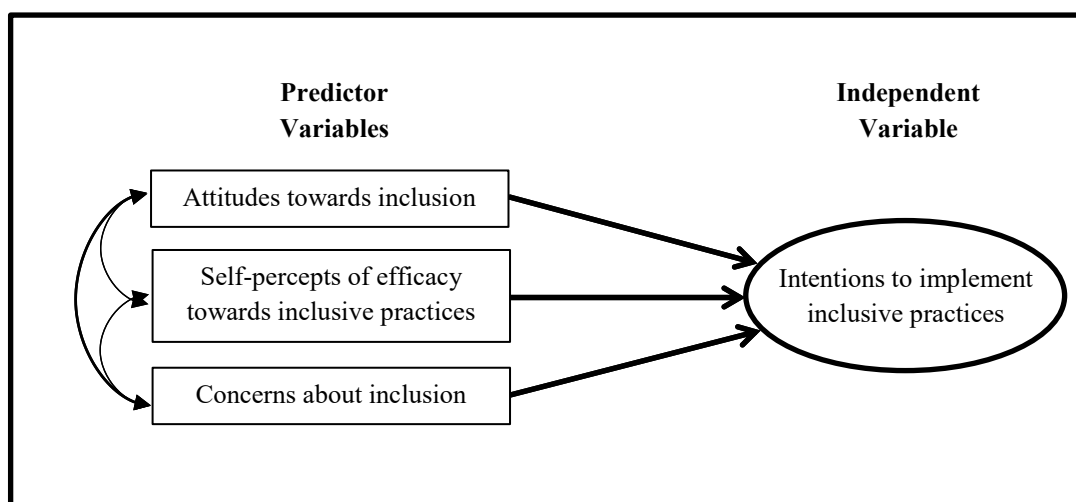
Figure 3.1: Study model

3.3 Data Collection Procedures and Participants

The study was conducted during a CPD course offered by the Department of Humanities, Philosophy and Education at the University of Salerno, Italy. This is an intensive course offered by Italian Universities whose organisation and structure are regulated by the Ministry of Education, Universities and Research (Ministerial Decree 30/09/2011). Eligibility to participate is based on a written entry test and the demand is significantly higher than the places on offer. A detailed explanation of the course content and organisation is presented in section 1.4.2 on page 35.

There were two courses which ran in parallel. One was targeted for student-teachers who were to work as LSTs in nursery or primary schools and the other was intended for those interested in working in lower or upper secondary schools. The necessary permission for data collection was obtained from the Director of the Department of Humanities, Philosophy and Education of the University of Salerno and the Professor responsible for the course. The questionnaires were administered by the researcher during the first lesson. All course participants were invited to respond. Although 177 student-teachers were enrolled, 156 questionnaires were returned. The vast majority were females with

experience as mainstream teachers. The average years of teaching experience was 6 years. The majority of the respondents were between 31 and 40 years of age.

3.4 Instruments

All respondents were required to complete a survey composed of 5 sections. The first three parts included four scales; the Attitudes towards Inclusion Scale (AIS) (Sharma & Jacobs, 2016), the Intentions to Teach in Inclusive Classrooms Scale (ITICS) (Sharma & Jacobs, 2016), the Concerns about Inclusive Education Scale (CIES) (Sharma & Desai, 2002) and the Teacher self-efficacy for Inclusive Practices Scale (TEIP) (Sharma et al. 2012). All these scales have been validated in different country contexts but have never been used in Italy except for the TEIP scale. The fourth part of the survey collected the demographic information required whereas the fifth part included two open-ended questions.

THE AIS AND ITICS SCALES

The first part included two scales. The AIS is a 10-item questionnaire that measures participants' attitudes towards inclusive education. The ITICS comprises 7 items aimed at exploring teachers' intentions to teach in inclusive classrooms. Both scales use a 7-point Likert type scale whose anchors range from *strongly disagree* (1) to *strongly agree* (7) for the AIS scale, and from *extremely unlikely* (1) to *extremely likely* (7) for the ITICS scale. These scales were developed purposely for a comparative study involving in-service teachers from India (n=349) and Australia (n=253) (Sharma & Jacobs, 2016).

The items in the AIS were based on themes that have frequently appeared in literature as regards attitudes towards inclusive education (Sharma & Jacobs, 2016). For the purpose of this thesis, the AIS was preferred rather than the SACIE-R subscales, *acceptance of learners with different support needs* and *sentiments about engaging with people with disabilities* since, the items in these subscales are based on a medical paradigm, measuring attitudes and sentiments towards specific types of disability. On the other hand, the AIS taps on beliefs and feelings regarding inclusive education which can be predictive of teachers' attitudes towards inclusive principles. Six of the items relate to beliefs while the

other four measure feelings. Two items are worded negatively. Examples of the items include "I believe that inclusion is beneficial to all students socially" (*beliefs*) and "I am excited to teach students with a range of abilities in my class" (*feelings*).

The ITICS contains items aimed at capturing the teachers' intentions to teach in inclusive classrooms. As with the AIS, the choice of the items was based on reviews of previous scales, shifting the focus from beliefs to actions regarding changes in curriculum (four items) and consulting other stakeholders (three items). Some examples of the items in this part of the survey include "Change the assessment task to suit the learning profile of a student who is struggling (e.g. providing longer time to complete the task or modifying test questions)" (*intentions to change curriculum*) and "Consult with colleagues to identify possible ways you can assist a struggling student in class" (*intentions to consult*).

THE CIES SCALE

The CIES is a 21-item scale which was originally designed to measure the concern of principals and in-service teachers regarding the mainstreaming of students with disabilities. The final 21 items were chosen from a pool of 36 items following a pilot study involving 25 principals and 29 teachers. This scale was then used to collect data from 484 primary school teachers and 310 school principals in India. The four factors revealed from the factor analysis were concern about *resources* (6 items), *academic standards* (6 items), *acceptance* (5 items), and *workload* (4 items). These are measured on a 4-point Likert type scale ranging from *extremely concerned* (4) to *not at all concerned* (1).

Examples for each of the factors include: "There will be inadequate para-professional staff available to support students with disabilities (e.g. speech pathologists, physiotherapists, occupational therapists)" (*concerns about resources*); "it will be difficult to give equal attention to all students in an inclusive classroom" (*concerns about academic standards*); "I will not have enough time to plan educational programmes for students with disabilities" (*concerns about acceptance*); "I will not receive enough incentives (e.g. additional remuneration or allowance) to teach students with disabilities" (*concerns about workload*). This scale was used in a number of studies since then. Two examples are O'Toole and Burke's (2013) study which used it in combination with the ATIES scale

(Wilczenski, 1992) to identify the correlation between the two factors, attitudes and concerns, among 110 pre-service, second-level teachers, and Sharma and Nuttal's research (2015) which used the scale to measure the effect of a teacher education course.

THE TEIP SCALE

The third part of the questionnaire was aimed at collecting data about teacher self-efficacy to teach in inclusive classrooms. Sharma et al. (2012), designed and validated the TEIP scale with the aim of bridging the gap in research on the correlation between teacher self-efficacy and the successful implementation of inclusive practices. Results obtained from the four-country study (Australia, Canada, Hong Kong and India) with a sample of 607 pre-service teachers showed that the scale can reliably measure their perceptions of self-efficacy for inclusion. A study conducted by Malinen et al. (2013) using a sample of 1911 in-service teachers from China, Finland and South Africa, further supported the three self-efficacy dimensions of the TEIP scale and the strong international differences. In Italy, the scale was adopted in three studies (Aiello et al., 2016; Aiello et al., in press; Hecht, Aiello, Pace & Sibilio, in press) which both confirmed its reliability and factor structure for the respective samples. In the latter article (Hecht, Aiello, Pace & Sibilio, in press) a number of studies conducted in Germany and Austria are also cited. Table 3.2, overleaf, summarises the salient characteristics of the four scales.

The TEIP Scale (Sharma et al. 2012) was considered the best scale to measure this variable since the items are context-specific. In fact, the three dimensions that emerged from the factor analysis conducted by Sharma et al. (2012) are: (a) Efficacy to Use Inclusive Instruction (EII), (b) Efficacy in Managing Behaviour (EMB), (c) Efficacy in Collaboration (EC). Examples of items of each of the dimensions are "I am confident in designing learning tasks so that the individual needs of students with disabilities is accommodated" (EII), "I am confident in my ability to prevent disruptive behaviour in the classroom before it occurs" (EMB), and "I am confident in my ability to get parents involved in school activities of their children with disabilities" (EC).

Table 3.2: Main characteristics of the four scales

Scale	Description	Factor Structure in Original Study
Attitudes towards Inclusion Scale (AIS) (Sharma & Jacobs, 2016)	*Number of Items:* 10 *Scale:* 7-point Likert Scale (1=strongly disagree to 7=strongly agree) Total score yielded: from 10 to 70 *Internal consistency obtained in original study (Coefficient H):* ranged between 0.81 and 0.9 (two-country study)	(a) Beliefs (b) Feelings
Intentions to Teach in Inclusive Classroom Scale (ITICS) (Sharma & Jacobs, 2016)	*Number of Items:* 7 *Scale:* 7-point Likert Scale (1=extremely unlikely to 7=extremely likely) Total score yielded: from 7 to 49. The higher the score, the likelier the intention to teach in inclusive classrooms *Internal consistency obtained in original study (Coefficient H)* *for subscale (a):* .74 and .84 (two-country study) *for subscale (b):* .48 and .67 (two-country study)	(a) Intentions to consult (b) Intentions to change curriculum
Concerns about Inclusive Education Scale (CIE) (Sharma & Desai, 2002)	*Number of Items:* 21 *Scale:* 4-point Likert Scale (4=extremely concerned to 1=not at all concerned) *Total score yielded:* from 21 to 84. The higher the score, the higher the degree of concern *Internal consistency obtained in original study (α):* 0.91	(a) Concern about resources (b) Concern about acceptance (c) Concern about academic standards (d) Concern about workload
Teacher Self-Efficacy for Inclusive Practices Scale (TEIP) (Sharma et al., 2012)	*Number of Items:* 18 *Scale:* 6-point Likert Scale (1=strongly disagree to 6=strongly agree) *Total score yielded:* from 18 to 108. The higher the score, the higher the level of teacher self-efficacy to teach in inclusive classrooms *Internal consistency in original study (α):* ranged between .86 and .91 (four-country study)	(a) Efficacy to Use Inclusive Instruction (b) Efficacy in Managing Behaviour (c) Efficacy in Collaboration

The fourth section of the questionnaire was aimed at gathering information regarding the respondents' gender, age, highest qualification obtained, specific training on special education and inclusion, number of years teaching and the grade level in which they taught at that time, last taught or intended to teach after the course.

IDENTIFICATION OF FACILITATORS AND OBSTACLES

The last section of the questionnaire included two open-ended questions, asking respondents to enlist three factors which, in their opinion, facilitated or hindered the inclusion of students with special educational needs in their class.

3.4.1 Instrument adaptation for the Italian context

The four scales were translated into Italian by the researcher, whose native language is English but has also good reading comprehension and writing skills in the Italian language and is very familiar with the Italian educational system. To ensure cultural appropriateness, this first draft was then reviewed by three academics, the scientific coordinator of this study and two researchers all working in the field of research in special and inclusive education. At first, each reviewed the scales separately and issues raised were then discussed together to reach consensus for a final version. A number of items were rephrased to improve comprehension and avoid ambiguity. The items which did not make reference to children with a disability or children with special educational needs were modified to include both cases.

This questionnaire was then viewed by 5 local experts who were asked to complete the questionnaire and annotate any observations or queries that came to mind while completing the questionnaire. The experts were one academic with expertise in quantitative research in education who had also been teaching for more than 10 years, a parent of a child with disability who had teaching experience at both primary and secondary levels for more than ten years, and three teachers who had recently completed their studies and had few years of teaching experience at different grade levels. A number of suggestions emerged regarding the terms used. Three of the experts requested a clarification of the term *classi comuni*

(mainstream classes) since in Italy it may have different meanings. A definition was added as a footnote on the first page of the questionnaire. One of the limitations highlighted included the difference in scaling between one set of items and another. It was decided not to alter these since it would exclude the possibility of any comparison with data collected in other studies. Another issue was the length of the questionnaire. However, due to the nature of the research, the three latent variables and the construct of intention needed to be measured.

3.5 Research Questions Guiding the Data Analysis

The research questions that guided the analysis of the quantitative data were:

- RQ1: What are the respondents' attitudes, intentions, concerns, and self-percepts of efficacy towards inclusion and inclusive classroom practices?
- RQ2: What are the relationships between the variables of interest?
- RQ3: Which of the three variables can best predict intentions?
- RQ4: Do the three variables together better predict intention?
- RQ5: Are there any differences in the way nursery and primary school teachers scored on the four scales when compared to teachers teaching in lower and upper secondary schools?
- RQ6: Is teaching experience influential on the way the respondents answered in the four scales?

The research question for the qualitative data was:

- RQ7: Which are the main factors that teachers feel may promote or hinder inclusive practices?

3.6 Data Analysis Procedure

QUANTITATIVE DATA

All the questionnaires were initially coded and the data was inputted. Descriptive statistics were produced for the demographic variables and each of the four scales to determine the mean, standard deviation and also data on each item of the scales. The Cronbach's alpha for each of the scales and the factors identified within each scale was also calculated. Correlations between the scales were investigated using Pearson product-moment correlation coefficient. To determine the research hypothesis, regarding whether predictability increased when grouped together, a Multiple Regression Analysis was carried out. T-tests were conducted to determine if there were significant differences in mean scores on the four scales on the basis of the grade in which the respondents taught or intended to teach after the course. The influence of teaching experience on the mean scores of the respondents for the four scales was calculated using one-way Analysis of Variance (ANOVA).

QUALITATIVE DATA

Given the manageable amount of data generated from the two open-ended questions, it was decided to carry out the analysis manually. Following the translation of all the identified factors that the respondents felt could be beneficial or a hindrance to the implementation of inclusive practices, the first step entailed familiarising with the data. The items were read and reread to look for patterns and generate the initial codes. Main themes were successively identified making sure that none of the factors were discarded. The data was then grouped under each theme and the frequency was recorded to provide a ranking and identify which factors are considered the most significant.

4. Analysis and Discussion of Results

4.1 Introduction

This chapter will present the results and discussion of the data that emerged from the analysis. These will be divided into the seven research questions that guided the analysis. Following the information regarding the sample of the 156 student-teachers who participated in this study, the descriptive analysis of the fours scales will be presented separately. Correlations between the scales were investigated using Pearson product-moment correlation coefficient. Successively, the results from the. t-tests, one-way ANOVAs and the linear and multiple regressions will be provided and discussed. The last section of this chapter is dedicated to the two open-ended questions regarding the factors that may be beneficial or pose obstacles to the successful and sustainable implementation of inclusive education.

4.2 Demographic Information

The participants represent a convenience sample of 156 student-teachers participating in a teacher education course which gives the qualification necessary to work as LSTs. The accessible population was 177 but 88% of the course participants returned the questionnaire. As illustrated in Table 4.1, overleaf, the sample was mostly composed of females 93% (n=145) and 7% (n=11) were males. Ages ranged from 26 to 56 years but a significant majority (64%, n=101) of the respondents were between 31 and 40 years old. As regards their highest level of qualification, only 15% held a high school diploma while the other 85% had a degree. Of these, 73% had obtained at least a Master degree and/or were in possession of a teachers' warrant. This means that they had followed the teachers' specialisation course following their Master degree. Eighty-three (53%) of the respondents claimed that they had also followed courses on special education while only 41(26%)

respondents had attended courses on inclusive education. The number of hours varied greatly from 1500-hour courses (23, 28%) to short courses of 50 hours or less (11, 13%) on special education. A similar trend was registered for courses on inclusive education. With regards to previous teaching experience, the vast majority (n=125, 80%) were mainstream teachers, while 17% (n=26) had never worked in schools. Only 3% (n=5) had already had experience working as LSTs.

Table 4.1: Gender, age and number of years teaching

	All		Nursery & Primary Schools		Lower and Upper Secondary schools	
	N	%	n	%	N	%
Gender						
Male	11	7	2	3	9	12
Female	145	93	71	97	67	88
	156	100	73	100	76	100
Age						
26 - 30 years	7	5	0	0	7	9
31 - 35 years	55	35	24	33	26	34
36 - 40 years	46	29	27	37	18	24
41 - 45 years	28	18	12	17	15	20
46 - 50 years	19	12	9	12	10	13
56 years and above	1	1	1	1	0	0
	156	100	73	100	76	100
No. of years teaching						
Less than 1 year-2 years	23	22	8	21	15	24
3 - 5 years	29	28	14	36	13	21
6 - 8 years	28	27	5	13	23	37
9 - 11 years	14	14	6	15	8	13
More than 12 years	9	9	6	15	3	5
	103	100	39	100	62	100

The teaching experience varied widely from less than a year to twenty years. The mean number of years was 6 years (n=103). The sample was evenly distributed in terms of the grade level in which the respondents taught or intended to teach; 44 (28%) in upper secondary schools, 32 (21%) in lower secondary schools, 34 (22%) in primary school and 39 (25%) in nursery school, 6 (4%) chose not to reply.

4.3 The Respondents' Attitudes, Intentions, Concerns and Self-percepts of Efficacy

In order to investigate these variables, a descriptive analysis was conducted. For each of the scales, the mean, variance, standard deviation and Cronbach's alpha was calculated. Further, this data was extrapolated for each of the subscales. As for each of the items, the range, minimum, maximum, mean, standard deviation and variance were calculated.

Reliability coefficients were found to be adequate for all the four scales, especially for the TEIP scale which was 0.939 (Table 4.11), followed by the Cronbach's alpha value for the CIES scale which was 0.891 (Table 4.8). As regards the AIS scale this was 0.69 (Table 4.2) and for the ITICS it was even slightly lower (0.656) (Table 4.5). Taking into account DeVellis's (2003) acceptable value of 0.70, the internal reliability of the first two scales can be considered as very good, while for the latter two it's slightly lower than acceptable. Item pruning is therefore suggested for these two scales before further administration to improve the psychometric properties, as advised by Sharma & Jacobs (2016). As for the different subscales, the three factors of the TEIP scale were also above acceptable levels (Table 4.12). The Cronbach's alpha varied from 0.889 for *Efficacy in Collaboration*, 0.880 for *Efficacy in Inclusive Instruction*, to 0.865 for *Efficacy in Managing Behaviour*. Three of the CIES subscales also had very good values (Table 4.9). The reliability value for *Concerns about Resources* was 0.861, for *Concerns about academic standards* was 0.839, and for *Concerns about acceptance* was 0.693. On the other hand, the Cronbach's coefficient for *Concerns about workload* was under the acceptable limit at 0.453. With regards to the AIS and ITICS subscales, these ranged from 0.484 to 0.656, which, as already highlighted, the data has to be interpreted with caution (Tables 4.3 and 4.6).

The respondents' attitudes and intentions

The mean values for the AIS scale show that the respondents' have very positive attitudes towards inclusive education. This is very important, since as suggested in literature, attitudes are an important predictor of inclusive behaviour (Avramidis & Norwich, 2002; De Boer et al., 2011; Ahmmed et al., 2012; Avramidis & Kalvya, 2007; Malinen etal. 2012). The mean value for the AIS scale was 64.29 (max. yield is 70) (Table 4.2), whereas for the two subscales, these were 38.79 (max. yield is 40) for *Beliefs* and 25.53 for *Feelings* (max. yield is 30) (Table 4.3). Analysing the responses for each item (Table 4.4), the highest mean value is for item 2 "I believe that inclusion is beneficial to all students socially" (mean = 6.94). The minimum value of 5 shows that all the respondents believed in this benefit. With regards to the respondents' intentions to teach in inclusive classrooms, the mean value was 45.29 (max. yield is 49) (Table 4.5). Hence, the student-teachers who participated in this study had very good intentions. This was also the case for both subscales, i.e. *Intentions to change curriculum* and *Intentions to consult* (Tables 4.6 and 4.7). Research related to the construct of intention is relatively new and hence it is difficult to discuss these results in light of past studies (Sharma & Jacobs, 2016). However, it has been posited that positive attitudes towards inclusion result in a higher likelihood to "improve educators' intention to consult and collaborate with colleagues – a necessary prerequisite to creating inclusive classrooms" (Sharma & Jacobs, 2016, p. 21).

The respondents' concerns

The student-teachers did not have many concerns either. In this case the further the mean from the maximum score (max yield = 84) the lower the respondents' concerns. The mean for the whole scale was 42.54 (Table 4.8), which is practically half the maximum yield score. The standard deviation and the minimum and maximum range values show that responses were varied across the 4-point Likert scale (Table 4.10). Nevertheless, none of the mean values for each item exceeded 3. The highest was 2.83 for item 14 "My school will not have adequate special education instructional materials and teaching aids (e.g. Braille)", followed by item 8 "There will be inadequate para-professional staff available to support students with disabilities and/or SEN (e.g. speech pathologists, physiotherapists, occupational therapists)" both falling within the subscale *Concerns about resources*. This is a very interesting result when compared with the data that emerged from the qualitative

analysis of the last open-ended question of the questionnaire "List three factors that hinder or will hinder inclusion of students with disabilities or SEN in you class". Among these factors, one of the main themes that emerged was *inadequate infrastructure and environment, and lack of resources* highlighted by a good number of respondents (n=65; 42%). Other concerns which also emerged through the comparison of the results from this scale and the qualitative analysis were item 3 "I do not have knowledge and skills required to teach students with disability" within the subscale *Concerns about Acceptance* with a mean of 2.39, and item 20 "There will be inadequate administrative support to implement the inclusive education programme". The latter item regards the subscale *Concerns about academic standards*. The student-teachers seem not to have any particular *Concerns about workload*. Remarkably, this did not emerge in the qualitative analysis either.

These results are in line with those of previous studies which claimed that although there are concerns, those related to having the necessary teachers' competencies and the lack of resources are very common among very different geographical contexts (De Boer, et al., 2011;. Round, Subban & Sharma, 2015; Vianello, et al., 2015; Cornoldi, et al., 1998; Balboni & Piedrabissi, 2000; Forlin, Keen & Barrett, 2008; Avramidis & Norwich, 2002; Sharma & Nuttal, 2015). This literature also placed emphasis on the importance of teacher education and contact with disability. The reasonably acceptable levels of the Cronbach's alpha for this scale, triangulated with the data that emerged from the qualitative analysis strengthen the conclusion that teacher education programmes need to include more practical, authentic hands-on experiences to provide teachers with opportunities to find creative, problem-solving strategies that they can use in their day-to-day activities.

THE RESPONDENTS' SELF-PERCEPTS OF EFFICACY

Descriptive values for the TEIP scale confirm previous research carried out by the University of Salerno that Italian teachers have high self-percepts of efficacy (Aiello et al., 2016a; Aiello et al. in press; Hecht et al, in press). In fact, the mean value of the whole scale was 82.79 (max. yield = 108) (Table 4.11) which gives a mean score per item of 4.6 on a 6-point Likert type scale. The student-teachers had high levels of teacher self-efficacy for *Efficacy in Collaboration* (subscale mean = 28.80), followed by *Efficacy to Use Inclusive Instruction* (subscale mean = 28.48) and, thirdly, *Efficacy in Managing*

Behaviour (subscale mean = 25.78) (Table 4.12). It could be argued that the lower value for *Efficacy in Managing Behaviour* could be due to the fact that whereas in the first two dimensions of efficacy, the teacher holds stronger decision power, behaviour management depends a lot on external factors such as the number of students per class, the level of motivation among students and so on (Table 4.13). Considering that 50% of the respondents had no or less than 5 years of teaching experience and efficacy in classroom management is difficult to predict, the result can somewhat be expected. The tables in the next pages provide the data for the AIS, ITICS, CIES and TEIP scales, discussed above.

4.3.1 Data analysis of the AIS scale

Table 4.2: AIS Scale Statistics

Mean	Variance	Std. Deviation	Cronbach's alpha	N of Items
64.29	32.947	5.740	0.69	10

Table 4.3: Statistics related to the two AIS dimensions – *beliefs* and *feelings*

Beliefs				
Mean	Variance	Std. Deviation	Cronbach's alpha	N of items
38.79	15.245	3.905	0.586	6
Feelings				
25.53	8.790	2.965	0.655	4

Table 4.4: Descriptive statistics for the AIS scale (per item)

Item Description	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
AIS1 All students should be in regular schools	156	6	1	7	6,63	,916	,840
AIS2 Inclusion is beneficial for all students socially	156	2	5	7	6,94	,284	,081
AIS3 Inclusion benefits all students academically	155	4	3	7	6,50	,840	,706
AIS4 Learning for all if teachers adapt curriculum	155	6	1	7	6,17	1,330	1,768
AIS5 Special schools not best option for serious disabilities	155	6	1	7	5,99	1,675	2,805
AIS6 Students with social-emotional problems should not be taught in special schools	156	6	1	7	6,54	1,277	1,631
AIS7 I would be pleased to teach low-achievers with others	156	6	1	7	6,18	1,221	1,490
AIS8 I am excited to teach students with range of abilities	156	5	2	7	6,35	1,002	1,004
AIS9 Including will make me a better teacher	153	6	1	7	6,25	1,290	1,665
AIS10 I am pleased to include students who need assistance	154	3	4	7	6,77	,534	,285
Valid N (listwise)	150						

4.3.2 Data analysis of the ITICS scale

Table 4.5: ITICS Scale Statistics

Mean	Variance	Std. Deviation	Cronbach's alpha	N of Items
45.29	11.288	3.360	0.646	7

Table 4.6: Statistics related to the two ITICS dimensions – *Intentions to consult* and *Intentions to change curriculum*

Intentions to consult				
Mean	**Variance**	**Std. Deviation**	**Cronbach's alpha**	**N of items**
19.84	2.535	1.592	0.491	3
Intentions to change curriculum				
25.44	5.362	2.316	0.484	4

Table 4. 7: Descriptive statistics for the ITICS scale (per item)

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
ITI11 Change curriculum to meet learning needs	152	5	2	7	6,08	1,131	1,278
ITI12 Consult parents of students struggling	153	3	4	7	6,64	,592	,350
ITI13 Consult colleagues about students struggling	154	2	5	7	6,82	,419	,176
ITI14 Willing to take CPD courses to teach SEN students	154	5	2	7	6,47	,826	,682
ITI15 Consult students with challenging behaviour to work better	152	6	1	7	6,39	1,081	1,168
ITI16 Include students with severe disabilities in social activities	152	5	2	7	6,44	,867	,751
ITI17 Change assessment tasks to suit student learning profile	153	4	3	7	6,48	,820	,672
Valid N (listwise)	149						

4.3.3 Data analysis of the CIES Scale

Table 4.8: CIES Scale Statistics

Mean	Variance	Std. Deviation	Cronbach's alpha	N of Items
42.54	104.650	10.230	0.891	21

Table 4.9: Statistics related to the four CIES dimensions – *Concern about resources*, *Concern about acceptance*, *Concern about academic standards* and *Concern about workload*

Concern about resources				
Mean	Variance	Std. Deviation	Cronbach's alpha	N of items
15.41	17.945	4.236	0.861	6
Concern about acceptance				
10.43	8.747	2.957	0.693	5
Concern about academic standards				
10.93	17.387	4.170	0.839	6
Concern about workload				
6.03	3.280	1.811	0.453	4

Table 4.10: Descriptive statistics for the CIES scale (per item)

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
CIE1 Not enough time to plan for SEN students	154	3	1	4	2,18	,964	,930
CIE2 Difficulty to maintain discipline	154	3	1	4	1,87	,634	,401
CIE 3 Not enough knowledge and skills required	154	3	1	4	2,39	,903	,815
CIE4 Additional paperwork	155	3	1	4	1,64	,805	,648
CIE5 SEN students won't be accepted by other students	155	3	1	4	2,03	,900	,811
CIE6 Parents may not like idea of having SEN students with their children	156	3	1	4	2,01	,994	,987
CIE7 Not enough economic resources to implement inclusion	156	3	1	4	2,49	,891	,794
CIE8 Inadequate para-professionals to support SEN students	156	3	1	4	2,64	,957	,915
CIE9 Not enough incentives to teach SEN students	155	3	1	4	1,36	,612	,375
CIE10 Workload will increase	156	3	1	4	1,39	,658	,433
CIE11 Non-teaching staff will be stressed	156	3	1	4	1,65	,855	,731
CIE12 Inadequate infrastructure to welcome students with disability	156	3	1	4	2,52	,980	,961
CIE13 Inadequate resources, teaching staff to support inclusion	156	3	1	4	2,62	,932	,869
CIE14 No adequate resources and teaching aids	155	3	1	4	2,83	,896	,803
CIE15 Overall academic standard will suffer	154	3	1	4	1,95	,986	,972
CIE16 Teaching performance will worsen	156	3	1	4	1,62	1,013	1,025
CIE17 Academic achievement of students without disability will be affected	156	3	1	4	1,73	1,049	1,101
CIE18 Difficulty to give equal attention to all	156	3	1	4	2,03	,861	,741
CIE19 Unable to manage autonomous SEN students without LSTs	156	3	1	4	2,00	,957	,916
CIE20 No adequate administrative support to implement inclusion	156	3	1	4	2,29	,881	,777
CIE21 Inclusion of SEN students will cause stress	156	3	1	4	1,58	,682	,465
Valid N (listwise)	146						

4.3.4 Data analysis of the TEIP scale

Table 4.11: TEIP Scale Statistics

Mean	Variance	Std. Deviation	Cronbach's alpha	N of Items
82.79	149.199	12.215	0.939	18

Table 4.12: Statistics related to the three TEIP dimensions – *Efficacy to Use Inclusive Instruction*, *Efficacy in Managing Behaviour*, *Efficacy in Collaboration*

Efficacy to Use Inclusive Instruction				
Mean	**Variance**	**Std. Deviation**	**Cronbach's alpha**	**N of items**
28.48	21.969	4.687	0.880	6
Efficacy in Managing Behaviour				
25.78	21.572	4.645	0.865	6
Efficacy in Collaboration				
28.80	19.373	4.401	0.889	6

Table 4.13: Descriptive statistics for the TEIP scale (per item)

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
TEIP1 Use a variety of assessment strategies	154	4	2	6	4,65	1,013	1,027
TEIP2 Provide alternative explanations when students are confused	156	4	2	6	5,19	,917	,840
TEIP3 Design learning tasks to meet all student needs	156	5	1	6	4,46	1,031	1,063
TEIP4 Gauge student comprehension	156	4	2	6	4,64	,977	,954
TEIP5 Provide appropriate challenges for very capable students	155	5	1	6	4,69	1,010	1,020
TEIP6 Get students to work in groups or pairs	153	5	1	6	4,93	,933	,870
TEIP7 Prevent disruptive behaviour	156	5	1	6	3,88	1,119	1,251
TEIP8 Control disruptive behaviour	156	5	1	6	4,19	1,023	1,047
TEIP9 Calm a disruptive student	156	4	2	6	4,49	,919	,845
TEIP10 Get students to follow classroom rules	156	4	2	6	4,65	,921	,849
TEIP11 Deal with physically aggressive students	156	5	1	6	3,99	1,041	1,084
TEIP12 Make my expectations clear on student behaviour	154	5	1	6	4,60	1,013	1,026
TEIP13 Assist families to help their children	155	4	2	6	4,68	1,005	1,010
TEIP14 Improve learning of students risking failure	156	4	2	6	4,73	,897	,804
TEIP15 Work with professionals to teach students	156	3	3	6	5,24	,804	,647
TEIP16 Get parents involved in school activities	156	4	2	6	4,65	,899	,808
TEIP17 Collaborate with professionals to design educational plans	155	3	3	6	4,96	,918	,843
TEIP18 Inform others on laws and policies	155	5	1	6	4,46	1,014	1,029
Valid N (listwise)	146						

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ANSWER TO RQ1

In summary, with regards to RQ1: *What are the respondents' attitudes, intentions, concerns, and self-percepts of efficacy towards inclusion and inclusive classroom practices?*, it can be concluded that this group of student-teachers have very positive attitudes, very good levels of teacher self-efficacy, a good degree of intention to act and few concerns about inclusive education.

4.4 Results from Correlational Analysis

ANSWER TO RQ2

To answer RQ2: *What are the relationships between the variables of interest?*, the Pearson product-moment correlation coefficient was used to investigate the individual relationship between the three variables and teachers' intentions. This question was formulated on the basis of TPB which postulates that positive attitudes and high percepts of self-efficacy increase intentions. Therefore positive relationships are assumed among AIS, TEIP and ITICS respectively. On the other hand, it is hypothesised that the lower the concerns the higher are the intention to implement inclusive classroom practices. Table 4.14 provides a summary of the results which show that there was a significant correlation between the AIS and the ITICS scale, the AIS and the TEIP scales and between ITICS and TEIP scales. This confirms that there is a significant positive relationship between the variables of interest, *attitudes towards inclusion* and *self-percepts of efficacy towards inclusive practices* and the variable *intentions to implement inclusive practices*.

Table 4.14: Pearson's Correlations between scales

	AIS	ITICS	CIES	TEIP
AIS **Pearson Corr.**	1	**0.521****	-0.045	**0.258****
ITICS **Pearson Corr.**		1	-0.099	**0.337****
CIES **Pearson Corr.**			1	-0.156
** Correlation is significant at the 0.01 level (2-tailed)				

4.5 Results from Regression Analysis

ANSWER TO RQ3

From the results of the previous question, it was already evident that the AIS scale, and therefore the *attitudes towards inclusion* factor was to be the best predictor of intention, thus providing the answer to RQ3: *Which of the three variables best predicts intention?* This is in line with the plethora of studies conducted and cited earlier in chapters 2 and 3. Figure 4.1 illustrates the linear regression analysis. The coefficient of determination (R^2) is equal to 0.27. Although it can be argued that this is low, research conducted by Ahmmed et al. (2013) reported an even lower finding (r = +0.406; r^2 = 0.16; p< 0.0005). Moreover, research has shown that attitudes can predict 30% of the variance (Armitage & Conner, 2001).
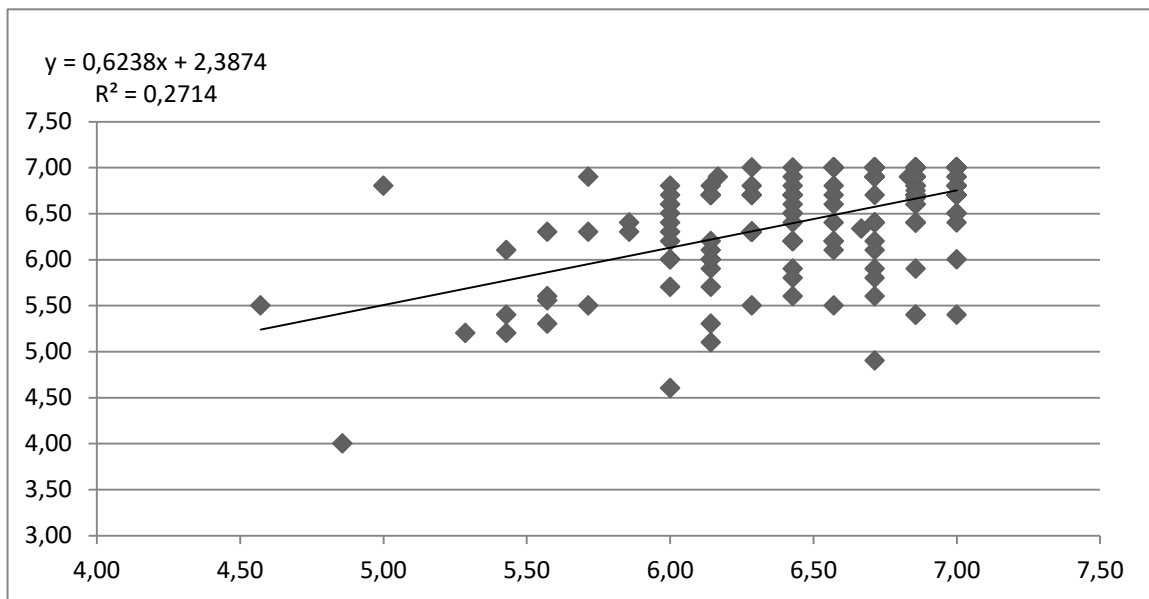

Figure 4.1: Linear Regression AIS scale with ITICS scale

ANSWER TO RQ4

With regards to RQ4: *Do the three variables together better predict intention?*, a multiple regression was conducted analysing the three predictor variables together against intentions. Interestingly, although there did not seem to be any correlation between intentions and concerns, the three predictor variables together yielded better results than the attitudes factor by itself. In this case the R^2 yielded was 0.318.

4.6 The Influence of Teaching Experience and Grade Taught

ANSWER TO RQ5

For RQ5: *Are there any differences in the way nursery and primary school teachers scored on the four scales when compared to teachers teaching in lower and upper secondary schools?*, a series of independent t-tests were conducted for each of the scales. The aim was to determine if there were significant differences in mean scores between the respondents who taught in nursery and primary school and those teaching in lower and upper secondary school. This decision was based on the fact that in previous studies, differences had emerged between teachers teaching younger children and those working with adolescent students (Aiello et al., 2016a; Avramidis & Norwich, 2002). Moreover, in Italy there is a distinct difference between the teacher education programmes of the two groups, with the former having more hours dedicated to didactics and pedagogy as well as practicum experiences. The results obtained showed that significant differences were only encountered in the AIS ($p = 0.045$) and ITICS ($p = 0.0017$) scales.

ANSWER TO RQ6

With regards to the influence of teaching experience on the manner the respondents answered in the four scales, one-way ANOVAs were conducted. Results showed that no significant differences were found. All the *p*-value results yielded were above 0.1. Therefore, to the question RQ6: *Is teaching experience influential on the way the respondents answered in the four scales?*, among this group of respondents teaching experience did not significantly influence the way they answered.

4.7 Factors Promoting and Hindering Inclusive Education

ANSWER TO RQ7

The final section of the questionnaire provided the answer to RQ7: *Which are the main factors that teachers feel may promote or hinder inclusive practices?* The respondents were asked to list three factors that, in their opinion, could be beneficial for inclusive education and three factors which, on the other hand, would hinder its implementation. Out

of the 156 respondents, 143 chose to answer the question, with some writing more than three facilitators and hindrances for each. Seven overarching themes were identified as beneficial factors contributing to inclusive education. In order of priority, according to the respondents' views, these are: *adoption of active, hands-on teaching strategies and activities* (n=130), *inclusive values and principles* (n=101), *collaboration among stakeholders* (n=64), *availability and use of resources* (n=54), *differentiated and individualised instruction to promote diversity and strengthen the students' potential* (n=32), *educational setting* (n=18), *teacher competencies* (n=18) and other issues (n=31).

In reorganising the respondents' answers on the factors that could possibly impinge favourably on the implementation of inclusive practices, 446 items were provided. These were initially grouped on the basis of frequently found keywords, with the top three being all related to teaching strategies. These were 'co-operative learning' (n=33), 'groupwork' (n=28), 'tutoring' or 'peer tutoring' (n=25). One could argue that the latter two strategies do not necessarily refer to the same strategy, since 'tutoring' could also refer to one-to-one teaching methods involving the teacher and the student rather than peers. However, the majority of the respondents who identified 'tutoring' as one of the factors had also identified the other two factors and hence it was decided to group these together. Moreover, all these strategies, added to a long list of other examples, were all grouped under the same theme: ***adoption of active, hands-on teaching strategies and activities***. These strategies ranged from very generic ideas such as "hands-on, practical workshops" (n=17), to specific classroom activities such as "brainstorming" (n=4), "role play" (n=3), and "circle time" (n=3). Others mentioned specific skills that should be promoted. These included "problem solving" (n=3) and "creativity" (n=2). Extracurricular activities which involve a good degree of action were also mentioned. These were "sport and motor activities" (n=4), "drama" (n=2) and music (n=2). The frequency with which these factors were mentioned shows that among this group of student-teachers there is a strong belief that teaching should be constructive and that students need to be offered authentic learning experiences in which they are physically and cognitively involved.

The *adoption of active, hands-on teaching strategies and activities* goes hand in hand with the ***availability and use of resources***. In fact, this was also a very common theme

with 35 respondents identifying the importance of the use of ICTs such as tablets, smartboards, multimedia and special software that could "compensate for the deficit" and "facilitate learning". Meanwhile, another 18 respondents mentioned resources without specifying whether it is an issue of availability, and therefore does not depend on their will, or their actual use.

Always related to teaching methods and strategies, another theme which emerged quite strongly was the implementation of ***differentiated and individualised instruction to promote diversity and strengthen the students' potential***. "Differentiated or personalised instruction" appeared 10 times, whereas "valuing diverse cognitive styles and the students' potential" was identified as a positive factor by 9 respondents. Two respondents specifically mentioned "differentiated student assessment" while adjectives such as "constructive", "adequate", "modern" and "special" preceded the noun "strategies". An interdisciplinary approach was also suggested by two respondents.

Special attention was given to ***inclusive values and principles***. In some cases they were specifically referred to as values the teacher should possess or convey but in the majority of responses, they were one-word inputs. "Empathy" was the most resonating value with 20 respondents identifying it as one of the three factors. "Participation, involvement and interaction" (n=10) and "giving importance to relationships" (n=9) were also considered as important factors. Figure 4.2, overleaf, illustrates the other values that were identified. Those closer to the centre were the most frequent replies. Much to the researchers' surprise and satisfaction, one respondent commented: "willingness to act (the difference)". The further the items are from the centre, the lower their frequency was.

The ***educational setting*** was another of the themes identified. Respondents used adjectives such as "serene", "stimulating", "welcoming", "structured", "adequate" and "ideal". Although ***teacher competencies*** were among the themes, this was not considered a priority, at least not directly since the use of the above strategies and resources outlined and all the values teachers are expected to have are also competencies. Four respondents explicitly identified "qualified and competent teachers" as a prerequisite for successful inclusive education. "Training", which includes both pre- and in-service courses was

mentioned by seven whereas three others referred to specific competencies. These were "know how to stimulate their [the students'] curiosity", "making the most of the resources available" and "personal dedication to improve oneself", which refers to reflective competence and lifelong learning.
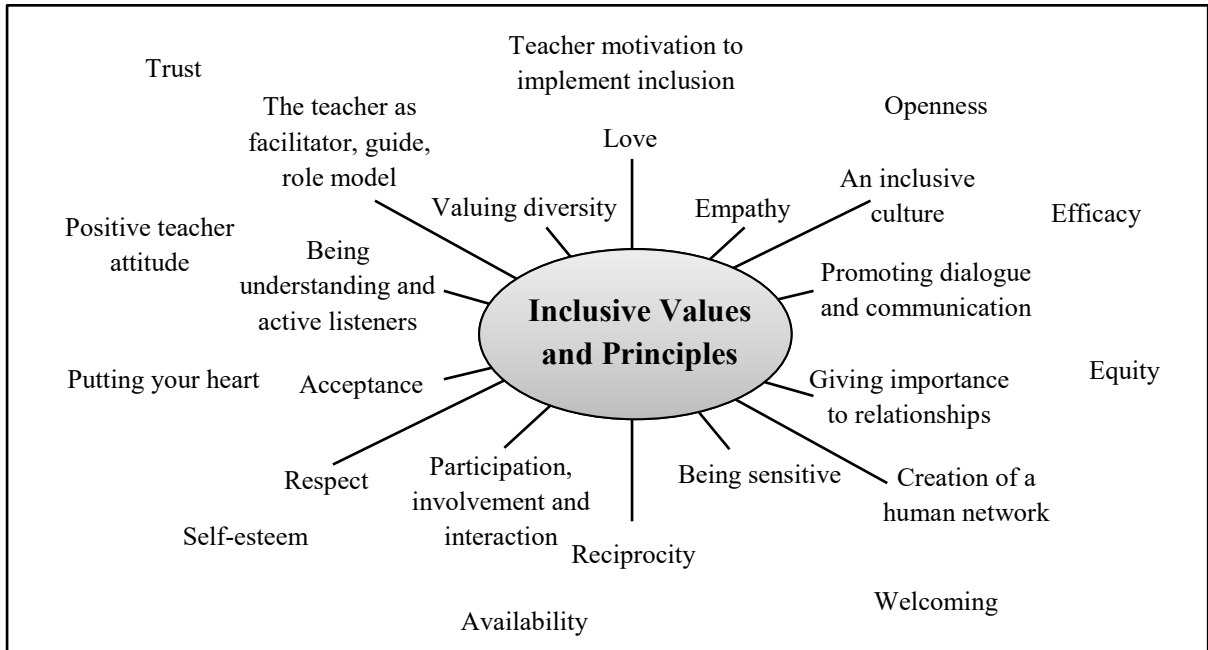

Figure 4.2: Inclusive values and principles identified as beneficial factors for inclusion

Whereas in the above factors the teacher holds much of the decision making power as regards whether to put these beliefs and priorities into action, the following themes identified depend heavily on external variables as well. Two of the main keywords were "collaboration" and "cooperation" and this included practically all the stakeholders from the administrative staff to the parents and other professionals. Interestingly, some actually distinguished between who should be reaching out to the other and in a good number of cases it was the teachers who needed to be more open to collaboration and not vice versa. Hence, these were grouped under the heading ***collaboration among stakeholders***. Fifteen respondents simply wrote "collaboration" or "cooperation", while a good number of respondents (n=24) made specific reference to the spirit of collegiality and teamwork among teachers. The rapport with families, parents and guardians was also highlighted as a priority with one respondent emphasising that this should be "built on trust". A few also

mentioned the importance of collaboration with and support from local entities and other professionals. In this latter case, the reluctance didn't seem to be from the teachers' side.

Remarkably, the respondents did not give much responsibility to the students. Neither to administration nor policy. Only four mentioned that there needs to be collaboration and solidarity among students. Other four respondents highlighted the importance of the presence of cultural mediators, most probably for those students who have difficulty in communicating in Italian. Only one respondent considered the presence of LSTs as a contributing factor. On educational and school policy levels, curriculum reform and targeted programming were together mentioned by five respondents. Very few respondents underlined the issue of "getting to know about the problem" and "screening students". Most probably this refers to cases where teachers are not informed early enough about students' needs.

Finally, there were some ideas which at face value may not be considered so inclusive. These have to be interpreted in light of Italian legislation regarding students with SLDs or SEN because among the guidelines suggested (MIUR, 2011b), teachers should dispense students from certain activities such as reading out loud in cases such as students with dyslexia. So, the idea of "exempting/dispensing students from certain activities" was not understood as excluding students from activities but, rather, as a way to avoid highlighting their deficits.

With regards to the factors that may create obstacles or be a hindrance to the successful implementation of inclusion, a good number of the responses were the "lack of" or "absence of" the aforementioned factors. However, very interesting aspects did emerge, which shift the attention from teacher-centred factors to situations where, in most cases, the teacher seems to have little or no control over.

One of the main factors related to the theme of *values, beliefs and attitudes that are not conducive for the promotion of inclusive contexts*, is the reluctance to being open towards students with disability or SEN and hence not valuing diversity and the students' potential (n=24). With regards to values, the respondents identified the absence or lack of "empathy" (n=10). They made specific reference to attitudes such as "prejudice" (n=10),

"discriminating attitudes and behaviour" (n=8) such as "labelling and categorising students" (n=4), "emphasising difference among students" and specific behaviour such as "verbal abuse", "ridiculing children" or "lowering the children's self-esteem". Five respondents mentioned the absence of "motivation to implement inclusive practices". Some other possible risk factors identified within this theme were "low levels of involvement and participation" (n=7) and "indifference or lack of knowledge" (n=3). These different factors were grouped together since the respondents did not make specific reference to the teacher and therefore could be considered as those beliefs, values and attitudes with which any stakeholder could influence school inclusion negatively.

An important issue related to one of the underpinning principles of inclusion is the planning and delivery of activities that involve all students. Behaviours that go against this principle strongly emerged. Whereas for the benefits, the respondents gave ideas of different teaching strategies that could be implemented, in this case they referred to the opposite of these innovative ideas as "traditional teaching methods" that "do not take various cognitive styles into account", "do not value diversity" or "do not value the students' potential" (n=42). Within the same theme of *choice of teaching styles and strategies*, the isolation of students from the rest of the class was quite frequently highlighted (n=30). The respondents gave specific examples such as "placing special needs students on a separate desk with the LST by their side as if he/she were a warden responsible for maintaining discipline and 'public order'". Others emphasized the wrong behaviour of taking these students out of the classroom or to use different textbooks and resources that accentuate differences.

Another theme which also already emerged as a beneficial factor if present, is the *collaboration among stakeholders*. In this case the respondents refer to the lack of collaboration, cooperation and communication as challenges that need to be taken care of. In outlining these factors, most of the responses were more specific with regards to whose collaboration is required. Whereas the "collaboration among teachers" (n=28) is still considered a priority, reference was also made to "parents and families" (n=10), and other professionals and stakeholders in general (n=19) which included examples of local agencies, the schools and local health authorities. An aspect which wasn't outlined when

choosing the positive factors, was the collaboration between "generalist or subject teachers and LSTs" (n=6), between "teachers and students" (n=2) and "among students" (n=2). The lack of information or misinformation within this network of stakeholders was also identified with statements as "lack of communication between the school and the family" (n=3) and "teachers not aware of the problem" (n=2). Another issue linked to collaboration was parents' behaviour. Five respondents made reference to parents, two of which limited their answer to the word "parents". Other two respondents mentioned the parents' refusal to accept their child's disability or need, which may lead to "hostility". The fifth respondent pinpointed the interference from parents whose children do not have a disability.

With regards to resources and tools, 22 respondents identified their unavailability as an obstacle. However, this time a lot of attention was also given to more infrastructural resources related to the school building and its organisation (n=22). Financial and human resources were also identified with four respondents valuing the presence of specialised teachers and personnel. Interestingly, three respondents made reference to the problem of overcrowded classrooms. This could be linked to the number of students in class or the size of the room. Very much linked to the theme of environment-related factors is the school and classroom environment. Ten respondents reported the importance of having a welcoming environment that is conducive to learning. The issue of inadequate initial screening was also highlighted. These factors were grouped under the theme: ***inadequate infrastructure and environment, and lack of resources***.

The importance of ***teacher professionalism*** emerged more concretely as a determining factor. "Inadequate or lack of training", "lack of teacher competencies", and "lack of knowledge on special education" were identified as obstacles to inclusion (n=18). Nine respondents commented that the absence of teachers' motivation, passion, engagement and willingness contribute to hinder the successful implementation of inclusion. Another eight respondents mentioned the teachers' "lack of flexibility to adopt inclusive practices" while two respondents highlighted that "inadequate communication with parents and students" could also pose a limitation.

Another theme which didn't emerge as a priority among the factors that promote inclusive practices was ***students' attitudes and behaviour***. In this case, the respondents highlighted a number of issues regarding the students' lack of "interest", "self-esteem", "early school leaving" and "misbehaviour in the classroom". Ten respondents mentioned the lack of "acceptance of students with a disability or SEN from other students", "mistrust among students" and "absence of solidarity".

One final theme identified, which could be considered as grouping factors that are beyond the school or the teachers' control is ***social, personal and biological factors***. Nine respondents identified social contexts, whereas personal and biological factors were mentioned by 6 respondents.

In summary, according to the 143 respondents who provided their opinion regarding the factors that bear a significant influence on inclusive practices are: *values, beliefs and attitudes that are not conducive for the promotion of inclusive contexts* (n=85), *collaboration among stakeholders* (n=80), decisions regarding *choice of teaching styles and strategies* (n=69), *inadequate infrastructure and environment, and lack of resources* (n=65), issues related to *teacher professionalism* (n=36), *social, personal and biological factors* (n=21), and *students' attitudes and behaviour* (n=19).

This data is very useful, not only to provide further insight on the quantitative results from the scales, but could be fruitful for the development of educational programmes targeting specific issues and providing ideas and solutions to overcome these hindrances. With regards to values, beliefs and attitudes, an array of previous studies have shown that contact with students with disability and SEN helps in changing teachers' attitudes even if this contact is not within the classroom (Castellini, Mega & Vianello, 1995; Mega, Castellini & Vianello, 1997, in Vianello et al., 2015; Ahmmed et al., 2012; Avramidis & Kalyva, 2007; Malinen et al., 2012; Boyle, Topping & & Jindal-Snape, 2013; Sharma & Sokal, 2015). Hence, teacher education programmes should envisage more practicum experiences in classes where students with disability and or SEN are present.

As regards the teaching strategies teachers use in class, more research needs to be carried out to understand why teachers do not engage in such practices. Investigations could focus on whether the teachers have the necessary skills to be able to use innovative teaching strategies, and what their concerns are. These could be related to their self-percepts of efficacy regarding inclusive instruction and classroom management. Therefore, it would be interesting to use a slightly modified TEIP scale as a pre post measurement to determine the effectiveness of a course targeting the introduction to innovative teaching strategies, gauging the items for the specific context of the study. Moreover, with regards to this theme of *choice of teaching styles and strategies* and also regarding *inadequate infrastructure and environment, and lack of resources*, teachers need to acquire creative problem solving skills and have a more proactive approach to overcome limitations caused by the lack of financial resources, architectural barriers and an array of other factors.

4.8 Limitations of the Study

A number of specific limitations have to be accounted for. First of all, as already highlighted, the respondents comprised a convenience sample of a group of 156 student-teachers. Although a lot of research has been published with similar sample sizes, this of course influenced the choice of statistical analysis that could be conducted and the possibility to validate the scales. Moreover, the significant imbalances in the demographic variables impinged on the possibility to highlight group differences. For example, male respondents were only 11 (7% of the sample). There was a high percentage of mainstream (generalist and specialist) teachers (80%) as opposed to 17% of respondents who had no teaching experience and a small number who had experience working as LSTs (3%). Levels of qualification couldn't be taken into account either since a vast majority (73%) had at least a Master degree, while only 15% were in possession of a diploma.

With regards to the design of the tool, during collection some respondents complained about the number of questionnaire items, which effectively was pretty high. In addition, the Cronbach's alpha coefficients for some of the subscales suggested that revisions need to be made before administering them to other samples. Literature also suggests that the anchors of the Likert scales should be the same throughout the questionnaire, whereas in this case

they were not. This was due to the fact that to allow between-country comparison the original format had to be respected as much as possible. The choice of the CIES scale as a proxy measure to investigate issues related to normative beliefs requires further thought, also in light of the Pearson's correlation results between scales.

As to the research hypothesis that these variables can predict behaviour, one must keep in mind that since inclusion in Italy is a politically correct idea with a longstanding history, there is the risk of the respondents giving socially-desirable answers that may not represent their everyday behaviour. Moreover, this particular group of respondents was attending a specific course to become LSTs and hence could be more prone to responding favourably. However, teachers may also be in favour of a particular principle, for example that all students need to be in regular classrooms irrespective of their ability or disability, but "it is another matter entirely how willing they are to make specific adaptations for these children" (Avramidis & Norwich, 2002, p. 143).

In conclusion, although one can say that this group of student-teachers have the 'prerequisites' underpinning the intentions to act, whether this is expressed in behaviour is a totally different study which it is hoped will follow after this thesis with a more representative and variegated sample.

5. Conclusions and Recommendations

"Theory and praxis walk into a bar. Theory orders a beer. Praxis drinks it. The bar was forever transformed." (Tweet @NeinQuarterly, 10/06/2014)

5.1 Concluding Reflections

Inclusive education has come a long way in Italy. At policy level it has provided the infrastructure necessary to give all the stakeholders the powers necessary to implement the strategies necessary to ensure quality education for all. In fact, to date nearly all students irrespective of their ability are enrolled in mainstream schools and the presence of special schools is practically non-existent. The underpinning principle is that all students are unique and different and each have their own characteristics and talents. It is a rights-based education system model within which all children – irrespective of their ability, gender, language, socio-economic status, ethnic or cultural origin – can be valued equally, treated with respect and provided with meaningful experiences within a lifelong learning perspective.

Needless to say that the global economic fluctuations, geo-political unrest and the scientific and technological advances have also added pressures on Italy and the educational system. This is due to the emergence of new forms of socio-economic disadvantage, immigration, and digital divide, just to name a few of the salient factors that have led to such a complex and unpredictable scenario. Teachers, therefore, are now faced with new challenges that go far beyond the presence of students with disabilities. They need to cater for each and every student whose needs vary widely and evolve over time. In addition, the shift in focus from knowledge attainment to competency-based approaches has further requested teachers to rethink their professional identities. From mere transmitters of knowledge, their role has become that of educating students holistically by facilitating their learning process through the provision of stimulating authentic experiences. This entails constant motivation, dedication and energy. But more than anything, it requires willingness to experiment new practices and the determination not to

give up in the face of difficulty. As a result, teacher education and CPD programmes need to be revisited in order to provide and strengthen the competencies teachers require.

As what concerns the specific study presented in this thesis, despite the objective limitations, this research provides some initial findings regarding the usability of the scales within an Italian context to investigate three of the underlying variables that influence the decision to act. The application of the TPB offers a solid framework to explore the intentions of teachers whether in pre-service or in-service career phases. Research in this field in Italy is relatively new. Building on prior research conducted internationally saves time from having to reinvent the wheel, guarantees higher validity and reliability of the tools and provides the groundwork for comparative studies. In fact, this research led to the planning and current implementation of a broader international project initiated by the research group at the Department of Humanities, Philosophy and Education at the University of Salerno. So far, six countries have adhered to the initiative.

On the basis of the studies conducted internationally and the results obtained in this research, the TPB seems to be suitable to guide the investigation of the relationships between the variables impacting on teachers' decisions to act within inclusive contexts and may be useful for designing teacher education programmes and to evaluate their effectiveness. The concerns that emerged highlight the importance of providing teachers with the necessary competencies to find solutions to overcome them. The two open-ended questions that closed the questionnaire confirmed the importance of triangulating data by integrating qualitative approaches in future studies. Moreover, it is important to highlight that although there is ample supporting evidence that these variables can predict the teachers' willingness to implement inclusive classroom practices, studies need to envisage the possibility of confirming whether the teachers' intentions are put into practice and if they are sustained over time.

5.2 Recommendations

Although this thesis used the TPB as a guiding framework for the study conducted, the theories identified in the second chapter brought additional insight on the complexity

underpinning teacher agency and the decision to act. For example, Berthoz's definition of action that it is "an intentional behaviour that predicts its own consequences since it results from a decision whose mechanism involves prediction and even attribution of emotional value" (Berthoz, 2003, p. 282), highlights the emotional aspect that is involved in decision-making processes. Biesta & Tedder (2006) view agency-as-achievement and concentrate on the importance of time and contexts thus defining agency as "something that has to be achieved in and through engagement with particular temporal-relational contexts-for-action" (Biesta & Tedder, 2007, p. 136).

Bandura's SCT provides practical guidance on how self-efficacy could be enhanced in teachers while Fishbein's IMBP model (2009) suggests that environmental factors as well as skills and abilities directly influence behaviour. Moreover, he stresses that despite the fact that these three psychosocial variables are very good predictors of intention and behaviour, teacher self-efficacy is highly dependent on the population and the behaviour being considered. Sibilio's (2014) application of Berthoz's theory of simplexity to educational contexts provides the basic principles and tools underpinning all competencies. Interestingly, these simplex principles and properties are innate competencies that, through reflective thought and action, their potential can be maximised. All these aspects are of extreme importance and need to be taken into account when planning educational programmes.

As to future studies, following the reflections from these theories, research needs to be more comprehensive in evaluating an array of factors within an ecological model that takes into account the multiple levels of influence. It is important at this stage to focus more on how teacher educators can impinge on these factors rather than whether correlations exist between these factors. An intriguing investigation would be that of evaluating the effectiveness of a professional development course based on a reflective approach that would lead teachers in reflecting critically on teacher agency using the simplex principles and tools as a guide. The four scales would be ideal to measure the factors before and after the course. Apart from their instrumental use in research, the four scales can be used to guide self-reflection processes in qualitative research and as formative evaluation tools to discuss and measure progress. The CIES scale can help in identifying the main issues of in-

service teachers in order to offer professional tailor-made programmes to fill the gaps in knowledge and abilities and reduce concerns.

As a concluding reflection, although knowledge and skills are indispensable, teachers must be '*ready, willing and able*' to engage with other people, objects and environments through a positive perceptive lens. The principles of inclusion need to guide the whole approach to being a teacher. Teaching in inclusive contexts is about the identification of predisposing, enabling and reinforcing factors which can provide the necessary leverage to implement effective classroom strategies and sustain them over time. In a nutshell, as the saying goes, 'where there is [a] will there is a way'.

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