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Finnish teachers' educators' conceptions about incorporating academic acceleration in primary education

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This thesis scrutinizes Finnish teachers' educators' understanding of incorporating academic acceleration within basic education. The study is interested in enabling Finnish educators to reflect on how diverse students' needs are met. For that reason, this study adapted phenomenographic methodology to makes sense of how Finnish educators perceive academic acceleration through their teaching profession in Oulu/Finland. Therefore, five educators have been interviewed in January and February/2019. Based on this study, to best provide support and appropriate instruction for the student in order to be granted an accelerative entry. The zone of proximal development and scaffolding instruction have constituted the theoretical framework.

This study introduces academic acceleration as an adequate pedagogy to serve students' diverse needs. Parallel to that sustaining the primary principle of inclusive education. Therefore, three different conceptions regarding academic acceleration have created the outcome space of this study. All the different conceptions are keenly linked to qualitatively serving students' diverse needs. The first conception, which expresses the majority, views academic acceleration as unwanted pedagogy by highlighting the adverse influence of academic acceleration on students' growth. In which enrichment was represented as more desirable, since it boosts students' academic development, as well as personal competencies. While the second conception places a strong emphasis on utilizing academic acceleration since it provides an opportunity for some students to excel in a more challenging curriculum, based on their needs, the third conception is related to teachers' role aligned with the previous two conceptions. In which reflect differences regarding teachers' responsibility to address academically able students' needs in order to serve them. However, there is intent for this study to recommend a discussion in teacher education about gifted programs, since controversies among educators exist.

Keywords: academic acceleration, gifted programs, enrichment, differentiation, teacher education, child development, basic education.

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1. Introduction

Each one of us has a story with the education system in his/her own country. Learning in my case was combined with a lot of stress and testing which easily built a negative attitude toward learning. What I admire about the Finnish success story is that it showed the world an alternative model of evaluation. Before having a look about how gifted students are served in Finland. The National Association for Gifted Education defined gifted students as "those who demonstrate outstanding levels of aptitude (defined as an exceptional ability to reason and learn) or competence (documented performance or achievement in top 10% or rarer) in one or more domains" (Silverman, 2013, p. 23). In Finland, gifted students are considered within the differentiation principle in regular classrooms. However, there is no official definition or description nor official policy for gifted students in educational reforms. This is a highly debated issue and critics saw it against the equity feature of the Finnish curriculum, because it can give privileges to some students over the majority (Tirri & Kuusisto, 2013). Also, Finland highly emphasized teachers' and students' trust and wellbeing for optimal practices to create a healthy bodies and minds, this design in education has put a little emphasize on high-stakes testing and promotes growth and learning for every one through cooperation, consequently, create a coherent community (Hargreaves & Fink, 2008, p. 235).

Three trends in education reforms described by (Sahlberg, 2007) have spread globally: Standardization tests of education, literacy and numeracy focus and consequential accountability. These features were adapted all over the world and has become the official agenda that describe the development in education policies. Finland has not followed this pattern of development in education and has come up with a new way. The features of the education policy in Finland differ from the international one by going beyond the existing system to find a new capacity for development which is based on equity as a grounded value instead of competition. It has gradually constructed a frame of trust and respect between all actors in the society and within its educational system.

Research shows that Finland's PISA success story can be attributed to the trust and interrelations between the different actors in the Finnish society that has been taken place since the 1960s (Välijärvi, 2002). Teachers' Trade Union has played a key role in rejecting market models to promote high achievement. However, the last two decades have seen a

slow erosion of social-democratic values in education, because of the influence of neo-liberalization (Sahlberg, 2007). Indeed, the Finnish education system apply inclusive education, care for good education for teachers and approved its affectivity to the learning process that causes the huge influence on the society as one consensus.

The first six years in primary schools set the foundation for lifelong learning skills in children and this has found to have a fruitful influence into two directions: first, it promotes children' positive attitude toward learning by their school attendance (Sahlberg. P, 2007). Second, it minimizes the variation between schools, solely to one/tenth of the total average in OECD (2004 cited in Hargreaves & Fink, 2008, p. 234). Education is fully financed by the government, all students can enroll regardless to their background and receive free meals, transportation, health care and consultation in their schools (Sahlberg, 2007; Välijärvi, 2002).

 My premise is that, acceleration is known as a learning pedagogy for students who are academically able. Despite the challenge of adopting a definition for the gifted in the previous decades, wide range of options that range from broad to specific components have emerged. This flexibility promotes varied setting to serve academically able students, each context determines what are the interplay components that constitute giftedness. Therefore, to go beyond the dilemma of labeling students as gifted, acceleration is an option that could be offered to students who show academic as well as artistic superiority. Since such pedagogy maintains the presence of educational challenges that maintain students' engagement and commitment in regular classroom. Differentiation considers an appropriate teaching philosophy to address the needs for diverse students and match them with the appropriate instruction and content, thus, acceleration might be offered as an option. According to some scholars, VanTassel-Baska (2005, p. 90), acceleration is an essential program to meet the need for students who seeks for more challenging curricula. The focus on the present study is on acceleration for intellectual students, in order to examine how teachers' educators, perceive and understand academic acceleration and check whether the involvement of such pedagogy is welcomed. Indeed, by exploring educators' attitude toward academic acceleration, will allow to probe other topics related to the main characteristic of basic education. The aim of the current research is to limelight if academic acceleration is affordable in the learning environment, or it is not very often implemented in Finnish primary schools and why. The latter echoes the current author's belief and not based on statistics.

In general, egalitarian countries emphasize on inclusive education and equality, where two issues can be avoided: labeling the student as 'gifted' which go against the equality principle, on the one hand, and the inadequacy of IQ tool for identification, on the other hand. The negative impact of these two issues become handled, since the updating field of giftedness seeks to adapt gifted programs for all the students. Then, students who demonstrate the appropriate competence can gain the program that suit their competence.

For such experience, acceleration is an appropriate option, if the teachers offer a flexible ground to serve students' different needs to reach their max growth (VanTassel-Baska, 2005). Similarly, Tomlinson (Hall, Strangman, & Meyer, 2003, p. 2) emphasize the role of differentiation pedagogy to fulfill each student need, "Teachers who differentiate provide specific alternatives for individuals to learn as deeply as possible and as quickly as possible without assuming that one student's road map to learning is identical to anyone else's". For that reason, teachers' belief is crucial to the process of implementing acceleration as an intervention strategy, as Richardson (1996, p. 107) mentioned 'beliefs are thought to drive actions. So, teachers' beliefs and their education are a critical component to approach acceleration in action with students' needs. Therefore, Finnish educators' perceptions are stone corner in teacher education to understand their coaching approach toward academic acceleration, in which meet the aim of this research.

This research relies on educators' conception concerning the integration of academic acceleration in primary school. For that purpose, phenomenographic paradigm has been adapted. This methodology has the potential to approach other people's understanding by revealing 'the differing way in which people experience, perceive, apprehend, understand, or conceptualize various phenomena in, and aspect of the world around them (Keeves, 1997, p. 97). As educators' understandings and observation are the object of the research, semi-structured interviews were conducted.

Moreover, in Finland, the differentiation process starts when students enter kindergarten. Where teachers can adjust the methods, activities, materials to suit each student's level (Laine & Tirri, 2016). Therefore, teachers can meet the educational demand for diverse students by differentiation pedagogy as a basis of learning.

Finland offers two forms of acceleration, which is not so visible in the public discourse of education. The first one is early entrance to first grade, when parents respond to their child's eagerness to learn, they ask for early entrance to school, in which their child enter

grade one at six instead of seven years old. And the next form is Curriculum Compacting which grant more time to go deeply in certain topic, it is more used in the high school than primary school (Tirri & Kuusisto, 2013).

Even though, some researchers as Tirri and Kuusisto (2013), Laine, S. (2016) have argued for giftedness in Finland. Where special schools can be an option to nurture giftedness. As Finland emphasis on inclusive education, where all the students can join mainstream education. Other extra activities can be a tool for supporting academically able students, such as: 1) summer camps for math and science topics, which usually being held in Tampere. 2) Regular training courses take part in Jyväskylä School, where students can join twelve hours every week in electronic areas and innovation by Nokia Company (Tirri & Kuusisto, 2013). To be clearer, this study calls to incorporate acceleration parallel with inclusive education, since I believe that all students should learn together within the mainstream schooling, including academically able students.

Commonly, teachers oversee the shortage of recommending acceleration as an approach to meet academically able students' needs. A research in American schools shows that even teachers who seems to be more knowledgeable about the advantages of acceleration, still not in favor of implementing it. The justification behind such sense can be attributed to the preference of placement by age group rather than placement by academic ability (Siegle, Wilson, & Little, 2013, p. 28). It is well-worth to devote an effort to address educators' conception in teacher education about academic acceleration, because educators can somehow influence teachers' thinking as well as their teaching approach at schools. For this reason, this study is an attempt to address teachers' educators understanding toward academic acceleration. In order to find answers for the lack of implementation toward academic acceleration, despite the availability of many researches that described the socio-emotional and academic benefits for accelerated students. Accordingly, discover what forms of acceleration is permitted in Finnish basic schools among other forms that exist today. If, acceleration is one option among others that can be implemented without doing rough identification and labeling. Historically, identification heavily relied on IQ test or high-stakes testing, in which are considered dilemma and curtail the encouragement of gifted education (Sternberg & Davidson, 2005, p. 11).

This study tends to shed light on acceleration within the positive learning approach. In which draw a close look at the relationship between acceleration and primary education.

The recommendations will rely on the teachers' educators' conceptions in primary schools. The research questions are **What are Finnish teachers' educators' conceptions about incorporating academic acceleration in primary education?** and **How Finnish educators serve diverse students' needs?**

2. Literature Review

2.1 Finnish education system

Education allows for knowledge, attitude and habits to transmit across different generations. Its primitive purpose is to enable everyone to develop proper personalities, besides enhancing different competences. Finland places a great emphasis on education, which is viewed as a substantial individual right (Finnish Education in a Nutshell, 2017). The Finnish national administration is encompassing two levels: Ministry of Education and Culture, which is responsible for education policy. While the Finnish National Board of Education is accountable for meeting the educational vision and fulfilling the adopted policies (EDUFI, 2017). Municipalities "are responsible for the practical arrangement of schooling and for composing the municipal curriculum based on the national core curriculum" (Kupiainen, Hautamäki, & Karjalainen, 2009, p. 16). Moreover, the Finnish National Board of Education (EDUFI) has to determine the requirements of the core curricula every decade. To discuss principles, values, and inspiration that can be considered attractive in Finland's education, entail the current author to begin with the declared aim of basic education, which is to nurture the students' "growth towards humanity and ethically responsible membership of society and to provide them with the knowledge and skills needed in life" (EDUFI, 2017). Hence, Finland's education is free, comprehensive, and fully funded by the government (Finnish Education in a Nutshell, 2017). A short description of the different educational stages with a visual demonstration from Finnish Education in a Nutshell (2017, p. 3) is provided as follows.

EDUCATION SYSTEM IN FINLAND

8	**Doctoral degrees** / **Licenciate degrees** / Universities
7 — 2	**Master's degrees** / Universities
6 — 3	**Bachelor's degrees** / Universities

Master's degrees / Universities of Applied Sciences — 1–1,5
Work experience 3 years

Bachelor's degrees / Universities of Applied Sciences — 3,5–4

Work experience → **Specialist vocational qualifications***
→ **Further vocational qualifications***

3 — 3 **Matriculation examination** / General upper secondary schools

Vocational qualifications* / Vocational institutions / *Also available as apprenticeship training* — 3

1 *Voluntary additional year of basic education*

1&2 — 9 **Basic education** / *7—16-year-olds* / Comprehensive schools

1 **Pre-primary education · 6-year-olds**
0 — 5–0 **Early childhood education and care**

visual demonstration from Finnish Education in a Nutshell (2017, p. 3)

Finnish parents are not required to send their kids early before the age of 6, unless their kids want to go. Preschool welcomed kids at age 6 while childhood education (ECEC) is for kids who want to start earlier. The learning approach in ECEC is based on playing (Finnish Education in a Nutshell, 2017, p. 15). While basic education is adapting a comprehensive education system, which is considered as fundamental ground to nurture students' personal competences (Moon, Vlăsceanu, & Barrows, 2003, p. 86). The first six years is class-based, where classroom teachers take care of this stage to allow students to "learn basic knowledge and skills and adopt attitudes of lifelong learning pays off in later grades through better aptitude and learning skills, as well as through positive overall outcomes" (Sahlberg, 2007, p. 153). While subject teachers are the one who handle junior education from 7 to 9 grade. In this view, basic education is not split into primary and

junior schools. Alternatively, it proposes nine years of basic education, which is administered with a single structure (Finnish Education in a Nutshell, 2017, p. 15).

After completing basic education, the student has two available options in upper secondary to choose in order to continue his/her study in the university, vocational and general education (Moon, Vlăsceanu, & Barrows, 2003, p. 86). Vocational education is more focusing on learning work skills, where the student engages in learning study courses as well as apprenticeships. Thus, the student ends up this stage with competence-based qualification. Whereas, in general education the focus is on study courses with flexible schedules. Where the student ends up carrying out the matriculation exam (EDUFI, 2017). Student's grade become a part of his/her admission to the university. This stage of schooling is not compulsory, the student can finish this stage in 2, 3, or 4 years. Since teaching instruction is not linked to students' age. Ninety percent of the students choose to continue their upper secondary learning, while the other who choose not to continue this stage immediately are able to come back later without any charge (Finnish Education in a Nutshell, 2017, p. 17). Regarding universities, colleges in Finland are constituted of two types: universities that focus on scientific inquiry, and universities of applied science prioritizes practical utilization.

This stated aim by (EDUFI) mentioned above addresses questions of how the philosophy of education will be oriented in basic education, and what educational policies are enabled to promote teachers' pivotal work in order to approach learning and teaching successfully. To do so, two fundamental views characterize the entire educational reality in Finland, which should be highlighted. Accordingly, make an impact on teacher training.

First, schools become a place to form learning centers. Primary schools take the form of establishing caring and learning centers, instead of "merely instructional institutions" that heavily focus on students' high performance (Sahlberg, 2007, p. 154). Where students and teachers can cooperate together to produce fruitful learning. Parallel to that, available free time for the students is another key feature in Finland's education. In general, schools often over-scheduling their students, since schools want their students to be better prepared for their further education. To over-schedule students' time can take different forms, such as: increase the duration of students' learning time or add extra homework for the student (Sahlberg, 2018, pp. 17-20). In doing so, schools forget to emphasize the benefit of extra time for the students to pursue their hobbies, interests, and peer's communication.

Second, "equitable distribution of resources rather than competition" (Sahlberg, 2007, p. 147), several principles can be derived from the FNAE stated aim, which is correlated directly to influence equity and equality (Sahlberg, 2018, p. 55). Equality means all the schools are comprehensive and identical. Where every student can attend the school regardless to his/her social and economic status, as well as, individual ability (Finnish Education in a Nutshell, 2017, p. 6). While making equity works, schools want to guarantee that every student in the school is acknowledged regardless his/her background. Where schools become keen to keep the learning environment fair as possible. For that reason, inclusion is considered as a fair principle. Regarding competition, teachers and school staff tend to be fair while accessing or rewarding students' progress. In this view, according to PISA results in 2001, Finland's education gained the outstanding performance in the international comparison, as well as, the smallest performance gap among students' outcome all through schools (Sahlberg, 2007, p. 158). To deduce one central observation from such results that Finland has reached a successful improvement in education based on fairness. Fairness in evaluation means that evaluation is not tied to rank students or compare their performance, instead evaluation is used to access the learning outcomes (Finnish Education in a Nutshell, 2017, p. 16). Therefore, national and international comparison are not desirable. To go further and reach a saturation level of fairness and equality: a student welfare, free meal, counseling and guidance are affordable in every school (Sahlberg, 2007, p. 154).

2.2 Inclusion

The aim of homogeneous classrooms is to serve all the students in the best way possible. It does so by encompassing average students, those with special needs, students (2e), second-language speakers, minorities and advanced students. The conference of Salamanca offered a new policy to guide educational reforms toward inclusion (United Nations, Educational, Scientific, and Cultural Organization, 2009). Although the focus of the conference was on students with special needs (SNS), the vision of inclusion was viewed as "a process of addressing and responding to the diversity of needs of all children, youth and adults through increasing participation in learning, cultures and communities. In addition, it included reducing and eliminating exclusion, within and from education. It also involves changes and modifications in content, approaches, structures and strategies, with a common vision that covers all children of the appropriate age range and a conviction

that it is the responsibility of the regular system to educate all children" (United Nations, Educational, Scientific, and Cultural Organization, 2009, pp. 8-9). The vision includes three principles: first, quality educational base to accommodate students' diverse needs. Second, social base to promote an attitude toward diversity and remove intolerance. Third, inclusive schools are more affordable for economic benefits. Despite the fact that the UNISCO emphasized the importance of inclusive schooling in the Salamanca reform, there are controversies concerning the practice of inclusion. Mock and Kauffman (2005) argued that inclusion could be viewed as an unreachable goal within the school to fulfill the needs of students with special needs. In a similar view, Terri (2013) has criticized the inclusion policy in Finland, for not meeting the needs of advanced students based on teachers' lack of knowledge, particularly gifted pedagogy. This led to a shortage of appropriate strategies and techniques, in order to serve diverse students' needs. Therefore, the adequacy of inclusion has been heavily debated (Wedell, 2008). Chong (2018) advocated for the Finnish experience in integrating students (SNS) systematically, that could be implemented by other countries. This approach has gained the support of public and leaders in Finland, especially in the primary school sector.

To understand the inclusive policy, one must first determine the reasons that make the field of gifted education unwelcomed. Teachers, educators, and policy makers should be aware of some side effect that might associate different practices. It has been shown that private schools for the advanced students were governed by privileged families, which promoted segregation within the school and society (Renzulli, 2005). Moreover, labeling students as gifted or non-gifted dampers equity and equality. Additionally, the identification process that rely completely on IQ tests seems problematic for its limitations, since it does not fit students with special needs. Also, the additional workload and preparation consumes teachers' time. Finally, negative competition hinders the learning process and affects the teaching approach. This means that the positive environment that supports the students' academic/personal growth is far to be reached. To combat that, Renzulli's model (2005) attempts to create a common ground between inclusion and academic acceleration. This is done by relying on a defensive action plan to meet the educational and social principles within the inclusive classrooms by emphasizing the role of elastic grouping options where the intellectual capacity is produced from dynamic group interaction (Renzulli, 2005). Where students can foster their competences by engaging in activities that are slightly

ahead of their actual readiness. This approach reflects the core of Vygotsky's term of the *'zone of proximal development'* (Vygotsky & Cole, 1978, p. 87).

Universally, a huge amount of work has been taking place to overcome the above-mentioned barriers. To do this, the field of giftedness needs to become more versatile in order to promote equity in the educational process which addresses students' diverse needs effectively regardless their backgrounds. Accordingly, Renzulli (2009) developed *rating scales* for teachers to identify students who own outstanding performance. This then allows teachers to nominate them to different educational programs. The scales cover a wide variety of characteristics that are suitable for primary school students. Instead of focusing on high-stake testing. Therefore, the scales do not solely focus on intellectual skills, but also include other characteristics, such as leadership, motivation, creativity, communication and technology. In addition to that, Gardner (Gardner & Hatch, 1989, p. 6) described seven learning styles that enrich education to assess students' manners more comprehensively, such as interpersonal/intrapersonal, bodily kinesthetic, musical and visual/spatial skills rather than teaching in one traditional manner. In a similar stance, Sternberg (1997, p. 1031) showed that the traditional tests only have the ability to determine analytical skills in an academic context, whereas the aspects of creativity and practical intelligence are neglected. These aspects are essential to determine the '*intelligence behaviors*' that are necessary for making-one's choice in order to adapt, change, or alter to a different environment. To achieve this, all the three components: analytical, practical and creativity must be presented to fit his theory of successful intelligence. Moreover, Tomlinson (2000) illustrated a powerful pedagogy to meet students' difference in the same classroom which is called differentiation. Such an approach enhances teachers' ability to design lessons, manage the class, and adjust the materials in various ways. This in turn affects students' engagement with learning positively, including advanced students.

Renzulli (2005) reflected on the latter process as an actionable strategy to make a positive change toward the unfavorable giftedness. This has caused a shift in dealing with giftedness which was described as "the development of gifted behaviors in specific areas of learning and human expression rather than giftedness as a state of being" (Renzulli, 2005, p. 81). As education is a right for every student (United Nations, Educational, Scientific, and Cultural Organization, 2009), it is crucial to determine whether the needs for advanced students are met or not in inclusive settings. A brief look at the standard that identifies the

educational needs for advanced students from, for example Canada, which seems applicable with the standard of inclusion. Advanced students are defined as "an unusually advanced degree of general intellectual ability that requires differentiated learning experiences of a depth and breadth beyond those normally provided in the regular program to satisfy the level of potential indicated" (Grayson, 2001, p. 123). The definition includes the characteristics for advanced students in order to meet their needs. Absolutely, modification of the materials in terms of depth and broadness is attainable in inclusive classrooms. Tailoring the depth of the curriculum is done in academic acceleration while the breadth of the curriculum is modified in enrichment, in which both of them are additional educational programs in the school. To prevent the repetition for topics that are already mastered by some students, academic acceleration and enrichment are considered appropriate replacement action plans that disallows boredom and disengagement (Reis & Renzulli, 2010). Thus, teachers should be well-prepared to do the planning and management in an effective way using different group options to meet this goal.

Differentiation is an elastic process where students can collaborate together in different group structure based on their ability, passion, or learning profile (Tomlinson, 2005). Students not only improve their cognitive skills but also gain personal growth. Actually, it is something that Finnish primary teachers are familiar with since Finnish primary schools accommodate diverse students' needs by differentiation, and using grouping option (Tirri & Kuusisto, 2013, p. 5). Teachers consider it as a dynamic tool to provide students with appropriate challenging instructions, associated with relevant aid. Teachers can expose the students to different levels of depth/broad materials along with several scaffolding strategies in the same class. In this manner, elastic group options emphasize the role of interaction with other students regardless of their capabilities (Fink, 1992, p.44-45). Consequently, elastic group options are highly recommended to serve diverse students' needs and are clearly distinguished from tracking which is a rigid process "to placing students in tracks from which they could not move" (Plucker, Burroughs, & Song, 2010, p. 31).

Teachers' education and training are top priority to ensure effective pedagogical dedication toward advanced students (Renzulli, 2005, p. 38). Students' success depends on teachers' ability to challenge their strength and motivate their engagement. Despite Finland's attempts to emphasize the importance of differentiation in educational settings, teachers' attitude toward the field of giftedness remains an obstacle (Guskey, 2002).

To conclude, this study values the role of inclusion, but also seeks to find applicable ways that are related to the field of giftedness. Although this study focuses on intellectual competency, this does not mean to devalue other competencies such as artistic and sport skills as intellectual competency involves them as well. Creativity, communication and leadership characteristics became critical parts within intellectual competency (Renzulli, 2005; Sternberg, 1997). In sum, Gottfredson (1997, p. 13) described intellectual ability as "a very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. It is not merely book learning, a narrow academic skill, or test-taking smarts. It reflects a broader and deeper capability for comprehending our surroundings-"catching on," "making sense" of things, or "figuring out" what to do"". Even though intelligence holds varying views from one setting to another, but it is the intellectual capacity for each setting that drive such differences (Sternberg, 1997, p. 1031). Therefore, educational programs such as acceleration and enrichment allow teachers to match the appropriate challenging content with students' desirable pace of learning. It is crucial to notice that not all academically able students are willing to excel at learning, since they vary (Renzulli, 2005). Within a repetitive content, academic acceleration and enrichment are not exclusive programs for a particular group of students, rather they are replacement content to offer the opportunity in matching students with appropriate challenge according to their interest and readiness.

Including students with special needs who can also experience educational programs similar to their classmates. Before discussing academic acceleration with special-need students, the following section describes how Finland integrate and serve students with disabilities.

2.2.1 Special- needs Students in Finland.

For a student struggling in his/her own learning and behavior, his/her problem may have started way earlier but remain hidden from others' sight. But only when such problems are noticed and intervened early in a child's life can the educators and parents secure a better life for the struggling child. Normally, children with learning disorders are those who have different chronic diseases such as sensory, cognitive, physical and intellectual impairment. That impact their everyday adaptation (Carlin, Delamore & Allard, 2015). Thus, the

Finnish education system has no medical or intellectual diagnosis for eligibility to special education. It is sufficient for the child's learning obstacle to be realized in order to gain support (Ström & Hannus-Gullmets, 2015). Also, Finland highly emphasizes the role of teacher for optimal practice and decrease in the learning barriers for special-needs students (SNS) in general schools (Takala, Pirttimaa & Törmänen, 2009).

Integration has been recommended by the educational policy in Finland, side by side with the launch of the comprehensive public school in 1970, as a preparation step toward inclusion (Ekstam & Linnanmäki, & Aunio, 2015). Time has gone by, the responsibility of serving (SNS) was shouldered in certain centers under the social welfare service, as a separated place from schools (Jahnukainen & Korhonen, 2003). In parallel to that, the growing demand for special teacher as a profession started (Ström & Hannus-Gullmets, 2015).

To give a brief idea about integration, according to Söder's (1980) recommendation it could be perceived and nurtured in four phases: start with 'Physical integration', when students with special needs exist in the same school or playground physically with their normal peers. Which leads to the second phase, 'Functional integration', when both participate in common educational class together as a functioning group. Third, when spontaneous interactions between them happen. Finally, when special-needs students interact with the whole society and have the same opportunity as well as their peers. In the case of Finland, the first two phases are already taken (Jahnukainen & Korhonen, 2003).

Moreover, schools could be an active ground to change perception toward (SNS), and raise awareness to understand what they face, in order to provide services that are helpful for their adaptation in ordinary life as a basic human right (Curran, & Runswick-Cole, 2014). Eventually, to encounter the most unfair factor for the social exclusion of (SNS), the appropriate political, social and environmental change are crucial (Curran & Runswick-Cole, 2014). For this reason, Finland has adapted different moves from 1970s until 'The Three Tier' model has taken place in 2011 (Pulkkinen, Räikkönen, Pirttimaa & Jahnukainen, 2018).

Proper background of this practice toward (SNS) is that schools' efforts in Finland accelerated the inclusive environment. When the schools carried upon them vital responsibilities for new generations, to create healthy communities by fostering essential values based on social inclusion, democracy, equality and collaboration (Graham &

Jahnukainen, 2011). Consequently, trust climate was progressively constructed with solidarity over time, to form the first primary step toward physical integration in the 80s with the Finnish national board of education in 1985 (Ekstam & Linnanmäki, & Aunio, 2015). Special teachers provide in-depth support with unofficial learning plan. Part-time support or 'pull-out' model is intensive support to cure the simple difficulties in reading, writing, mathematics, languages and behavior in the schools' resource room. The successful results in PISA attributed to this model (Graham,& Jahnukainen, 2011).

In Finland a further step toward the second phase of integration occurred through the Basic Education Act (628/1998) (Jahnukainen & Korhonen, 2003). To decrease the proportion of severe cases by integrating them within regular classroom and to ensure equality by having subject classes as their normal peers, flexible range of supplement and facilitation were arranged to include full-time special education. Furthermore, the Ministry of Education decided to adapt The Three Tier model as a frame restriction for delivery to the whole country in 2011. As an advance step toward equality and inclusion (Ekstam & Linnanmäki, & Aunio, 2015).

The reason for the new reform of the 3- Tier model lies in the shocking results come up when the number of (SNS) increased in the beginning of 21 century: 46% were transferred to partial or full special education. Which contradict the aim of the educational policy and leads to more exclusion than inclusion (Ström & Hannus-Gullmets, 2015). So, the state started to investigate to find answers which resulted in the above-mentioned numbers.

The kind of services that are offered to (SNS) are varied from one municipality to another. Based on the accumulated experiences where each municipality has its own autonomy, where the local frame is considered, and no rigid restriction for implementing different services (Ekstam & Linnanmäki, & Aunio, 2015). These differences lead to different criteria, so one who could be considered in pull-out model in one municipality, while the same case could be considered full-special education in another municipality (Ström & Hannus-Gullmets, 2015). These differences lead to demonstrate a desirable change in the 2011 to guarantee equality for all municipalities.

The Three-tier Model is an additional step toward pedagogical integration. It is quite similar to the two directions that Finland took before: pull-out model and full-time special education. Additional support, tier 2, for low performers. Also, it seeks to integrate more students by expanding the central support T2 and narrow down the attendance of students

to tier 3 or full-time special education (Ekstam & Linnanmäki, & Aunio, 2015). Consequently, the ascending expense of special schools were cut down. This model required vast range of evaluations and documentation in each tier and collaboration between class teachers with special teachers (Takala & Pirttimaa, & Törmänen, 2009).

Through differentiation principle, learning difficulties will be noticed in general education, which leads to immediate support from the classroom teacher as a first stage. If this support is not sufficient, 'pull-out' special education model will be available. Neither official statement nor an individual educational plan for specific individual needs are required to allocate this service, and collaboration with special- need teachers is essential for a meaningful participation for students with learning difficulties in schools. This stage equated tier 1 (Takala & Pirttimaa, & Törmänen, 2009). The new stage is tier 2, intensified support, pedagogical statement is required. The expand of this stage will narrow down the attendance of students to tier 3 or full-time special education, an alternative plan when intensive support falls to meet the educational expectation, based on scientific knowledge and both official statement and Educational Individual Plan. For those who is put in tier 3, funding will be provided substantially by the Ministry of Education and a welfare group. Otherwise, students will stay in tier 2 or return back to tier 1, depend on his/her improvement (Ekstam & Linnanmäki, & Aunio, 2015).

But there are controversies concerning the practice of inclusion. UNISCO addressed the necessity of inclusive schooling in the Salamanca reform in 2004 (Hardy & Woodcock, 2015). Many argued that inclusion could be viewed as unreachable goal within the school to fulfill the need of (SNS) to the fullest (Mock & Kauffman, 2005). Globally, heated discussion has been taking place on the adequacy of inclusion. However, Chong (2018) advocated for the Finnish experience in integrating (SNS) in a systematic way, that could be emulated by other countries. But some scholars addressed some gaps that could restrain the positive outcomes. For instance, the extra load work become demanding, as Takala (2009) and her colleagues said that joint responsibility for special-teacher not only requires teacher to become responsible for the special classes but s/he also has to offer extra work to promote inclusion within the school. Similarly, Ekstam and her colleagues (2015) explained how teachers' efforts geared to deal with the total amount of documentation and administration, instead of serving that time in teaching and planning. In another vein, regarding giftedness, some researchers criticize Finland's education by keeping more attention toward (SNS) students while putting little emphasis on academic excellence

(Tirri, & Kuusisto, 2013, p. 2). In alike manner and in a general sense, Laine (2016) describe that most Finnish teachers' effort are concentrated on dealing with (SNS) requirements, while high intellectual ability is not receiving much attention in the Finnish context or even the same concern as (SNS) students' demand (p. 32). In this regard, the responsibility of teachers is huge in order to address social and academic capacity within the mainstream schools. Since they have a great autonomy and good education to be able to well-address special-needs students, as well as, academically able students' requirements.

What makes the rising level of inclusive education in Finland successful toward (SNS) students is two central points, the qualified Finnish teachers and the positive teachers' belief toward special-needs students (Saloviita & Schaffus, 2016). This study supports the idea of integrating (SNS) in comprehensive schools, which is considered as a good tool to extend the social capacity among normal students. Since they can recognize what (SNS) students are facing, and how (SNS) students encounter these difficulties. Consequently, normal students can be more compassionate with them. In this way a profound understanding between the two groups of students can be established, which is beneficial for nurturing a more inclusive society in the future, as well as, meeting the stated aim of educational reform (mentioned in the previous part). In which turn to highlight the role of teachers' training and education to ensure teachers' capability to fulfill the aim of inclusive education.

2.3 Teacher Education

As inclusive classroom places diverse students together, requires professional teachers to ensure successful learning for the students. Teaching in Finland is recognized as the most important profession. As the body of teachers and administrators are national resources of precious value, it is true to say that Finland has always considered them as such. Thus, teachers are given broad latitude in the basis of two grounds: well-equipped for their career on the one hand, and highly trusted with "sustainable leadership" on the other hand (Sahlberg, 2007, p. 157). Together are positively influencing the level of students' learning and teachers' continuous development. Since, teachers who are well trained are more likely to be satisfied and have a strong commitment to their profession (Simola, 2005). Therefore, Finland invests in teacher education, where teachers have to obtain a master's degree which is mandatory to be employed (Sahlberg, 2007). The first ground that reflect teacher

professionalism is encompassing a brief discussion about several parts: historical experience about Finland's teacher training, the selection process of suitable candidate for teacher training, and research base is a significant feature in Finnish teacher training. Together allow for improving teachers' professional capacity. Then comes the second ground which include: trust and sharing leadership.

2.3.1 Brief look of historical experience

Teacher training is a source to prepare proper teachers' competences and attitude toward teaching (Guskey, 2002). It becomes a key stone which enable teachers to understand child psychology and pedagogical skills in order to groom students' personalities, as well as, psychomotor and academic skills.

The time Finland's was striven for the betterment of education started when teacher education has been established in the middle of the nineteenth century. The purpose is to provide teachers with the appropriate pedagogical training. Teachers training took two directions. The first direction was more dominant, which is to prepare teachers for junior education. While the next direction was concerned about preparing teachers for primary and kindergarten education (Moon, Vlăsceanu, & Barrows, 2003, p. 85). Recently, additional parts become integrated, such as vocational school, senior education, and ECEC.

The term 'educators', which is used in this study and refer to those who prepare teachers for their pivotal work. As it has existed historically, educators' responsibility did not consist of passing on their skills and knowledge through supervising real teachers' work, but also extended further to reach overall school's development. Teacher training took the form of seminars and practices to model proper actions (Moon, Vlăsceanu, & Barrows, 2003). In 1863, efforts were done to produce the first college of teacher preparation for primary education in Jyväskylä. Gradually, this official status for teacher preparation extended further to increase the number of colleges that are concerned for teacher preparation, parallel to that, the universities have become responsible about teacher preparation in 1971 (Moon, Vlăsceanu, & Barrows, 2003). One of the distinctive characteristics in teacher preparation from that time is the implication of learning theories and teachers' practices, in which still relevant until today (Westbury, 2005).

Teachers preparation has been integrated within the department of education. Where class-teacher study in the department of education while subject teachers are in their subject matter, but both earn training and identical educational status (Moon, Vlăsceanu, & Barrows, 2003, p. 86).

2.3.2 The process of selecting students for teachers training

The selection of students into initial teacher education or training is highly competitive, the acceptance percentage of the candidates are at most 15% (Moon, Vlăsceanu, & Barrows, 2003, p. 87). Student teacher candidates should display that they have certain competences in order to be accepted. For that reason, the selection criteria are based on two stages: the first stage includes the candidates' scores in the matriculation exam and their collective school's average. Moreover, what is considered advantageous for the candidate is to own an experience dealing with youngsters. The second stage focuses on academic and non-academic competences, where the candidate should pass an exam, and demonstrate adequate communication capacity. Finally, the candidate explains reasons why they are attracted to become teachers by engaging in individual interview (Moon, Vlăsceanu, & Barrows, 2003, p. 87).

2.3.3 Central Feature in Teacher Training

Within universities, the value beyond teacher preparation is relying on "the idea of research-based teacher education" (Moon, Vlăsceanu, & Barrows, 2003, p. 89). In which doing a thesis is part of teachers' profession. The benefit of doing that is to keep teachers up with changes and enable them to find a solution for educational challenges. Accordingly, teachers who are more able to conduct a research, are more likely to seek for improving their performance. As Finland is adapting administrative decentralization, where teachers and administrators are having a great autonomy in educational reforms (Westbury, 2005, p. 476). Nowadays, teachers are empowered to make decisions about the curriculum development by increasing their involvement, in which the foundation of quality teaching and how to access students' development are relied on teachers' real experience. Westbury (2005, p. 477) stated the aim for integrating research base in teachers' preparation is "to develop teachers who have the capacity to use research and research-derived competencies in their on-going teaching and decision-making. Thus, this goal can

be attainable through in-service and pre-service courses in order to make a positive impact on students.

Within pre-service course, three basic matters are encompassed within teachers training for pedagogical reasoning, which are: first, "pedagogical content knowledge", it is not enough for teachers to only teach their subject without being aware of knowledge about different ways to teach successfully. Second, "the theory of education" which refers to multiple theories that provide general principles regarding learning and teaching. Third, "subject didactics and practice" refers to the art of teaching (Moon, Vlăsceanu, & Barrows, 2003, p. 90). The connection among the three areas are reciprocal and are framed within the approach of research base. Therefore, every year teachers are engaged in a teaching experience, and every experience is constantly aligned with educational theory and research (Westbury, 2005, p. 478). The totality of these three areas promote teachers' competence to better approach learning, teaching, and students' progress through research. Thus, each teacher wraps up their education by a written thesis. When teachers are highly qualified, other features can be generated, such as trust and autonomy.

2.3.4 Trust and Sharing Leadership

It seems that Finland considered high trust to be a major contributor to educational success. Some researchers acknowledge the advantages of trust relationship for improving institutional performance and behaviors (Dirks, 2000). When trust relationship between teachers and administrators is truly established, schools become deeply enhancing teacher's collaboration, thus, performance. Then, teachers' autonomy becomes naturally integrated to the system. Where crucial decisions about the learning and teaching approach are left to school faculty (Finnish Education in a Nutshell, 2017, pp. 12-13). Correspondingly, school's administrator's responsibility is to promote and evaluate teachers' performance. Instead of employing a comprehensive policy to all the schools that left no room for local differences. Moreover, as testing policies and standardized test are widely used throughout the world, it is viewed in Finland as reducing teachers' autonomy. In this view, teachers become concentrating on materials that are more likely to be tested. Or use any available class time to prepare the students in order to be ready to do the tests and pass. Particularly, when test results become part of teachers' and schools' evaluation,

then, teachers unavoidably are having little autonomy through the teaching approach, since they are "teaching to the test" (Volante, 2004, p. 1).

Another central element for Finnish teachers' effectiveness is sharing leadership (Harris, Hargreaves, & Fink, 2008). High qualification is a major facilitator for teachers to reach several broad purposes. Such as develop teachers' competences and attitude toward teaching (Guskey, 2002), increase their motivation and commitment, and encourage teachers to be part of the school and international development (Sahlberg, 2007). Even though teachers are well-prepared, it is not an easy task to make a meaningful enhancement in the school, since school setting is rich in complexities and challenges. To overcome these difficulties, entails school administrators to promote teacher's collaboration not just within the individual school, but also to establish a networking contact system all over the entire schools through shared leadership. In which constitute a sustainable guidance for school improvement. For that reason, qualified teachers with high autonomy integration can work collectively with their administration in order to achieve a "continual adjustment of schooling to the changing needs of individuals and society" (Sahlberg, 2007, p. 157). In alike vein, according Hargreaves and his colleagues (2008, p. 4) generating synergies among schools can foster teachers' professional capacity through "communities of practice". In particular, when "professional networks are flexible and resilient in the face of crisis or misdirected system initiatives that turn out to be unsuccessful–allowing new learning and fresh solutions to emerge and fill the gap that the false starts and failures have left behind " (Harris, Hargreaves, & Fink, 2008, p. 8).

Regarding giftedness, to address academically able students appropriately begins from teacher's education and pre-service program. Where teachers become familiar with gifted educational programs and the way of implementing them meaningfully. Even though Finnish teachers are not openly engaged with giftedness, pedagogical discussion among teachers in teacher education about academic acceleration and enrichment enable teachers to be more aware of the field and about the updating content of giftedness, instead of ignoring the topic and keep holding the negative perspective about it. Finnish teachers use to serve diverse students' needs with the pedagogy of differentiation. Where teachers can find the adequate challenge that correspond to every students' ability. For that reason, the next section provides a description about the differentiation, followed with general explanation about the field of giftedness.

2.4 Differentiation Pedagogy:

Differentiated instruction is considered an effective approach in the inclusive classroom, since it addresses the needs of all students: average students, advanced students, struggling students, students with special needs and students who are learning second languages (McQuarrie & McRae, & Stack-Cutler, 2008). Through differentiation, teachers can eliminate or simplify the instructions. This manner echoes Vygotsky' idea (Vygotsky & Cole, 1978) about the relationship between teaching instruction and students' development within their potential learning zone. Across growth, Vygotsky (Vygotsky & Cole, 1978) identified students' growth in terms of two levels: the first level reflects certain issues the student can manage alone without aid (comfort zone) while the second level reflects certain issues the students can manage with aid (outside their comfort zone). Learning at schools captures the second level to achieve development within the students' potential learning zone. Teachers need to consider two aspects through teaching. First, "instruction is only useful when it moves ahead of development" (Veresov, 2004, p. 2), which justifies the use of replacement programs to avoid repetitive content or instruction. Second, appropriate gradual aid from teachers/peers at any level should be considered (Vygotsky & Cole, 1978) like the use of scaffolding instructions to help the students achieve mastery through feedback (VanTassel-Baska & Stambaugh, 2005, p. 214). In this way, students who are more likely to master certain learning basic skills more rapidly than their companions can have the opportunity to excel in their learning by enrichment or acceleration, as follow up programs. Additionally, it should be kept in mind that the aim of these educational programs "does not come from how we identify students, but rather what we do with students to challenge the unique strengths that brought them to our attention" (Renzulli, 2005, p. 9).

Another curriculum model that was proposed by Renzulli and his colleagues (1983) is *Curriculum Compacting* model. Two objectives are met through this model. First, teachers can provide more challenging content by eliminating the repetitive content and delivering directions for students who display a mastery in basic skills. Second, it substitutes the available time with replacement programs, including enrichment/ acceleration. It is essential for teachers to notice that mastery is a precondition to compact the content and leads to more students' engagement (Renzulli & Smith, & Reis, 1983).

To implement curriculum compacting model, the teacher should rely on tiered content, activities or product to assess all students (Tomlinson & Imbeau, 2010). Renzulli and his colleagues (1983, pp. 99-102) which can be achieved through three simple systematic procedures. First: teachers need to address students' mastery to scrutinize it for compacting in a way that meets students' needs. Second, teachers should set certain expectations for their students, where these students join two hours/week pull-out class in their strength and at the same time join scaffolding instruction to overcome their weakness in the original class. Finally, teachers can decide to individualize students' learning by providing enrichment or acceleration program. This is done in cooperation with resource-room teachers to do the planning together. Students can receive either program or both, based on students' interest and portfolio, in order to make safe decisions.

As differentiation is an elastic approach, it allows teachers to modify the curriculum in several ways to meet students' zone of potential learning in the same setting (Tomlinson & Imbeau, 2010). Constant modification is necessary since students' differences impact the way they learn and subsequently scaffolding strategies they need should be tailored throughout their learning experience. This entails teachers, first, to gather relevant information about the students (portfolio) to decide whether to accelerate their learning. The process starts within differentiation, as Hall (2002, p. 1) defined the purpose of differentiated instruction "to recognize students varying background knowledge, readiness, language, preferences in learning, interests, and to react responsively". Accordingly, this information constitutes students' portfolio and be used to guide teachers' instruction. Teachers can assess students' understanding through three learning aspects: the presentation of the content, the use of relevant activities (process), and the products that display students' learning (Tomlinson & Imbeau, 2010, p. 15). Furthermore, elastic grouping, acceleration and enrichment take differentiation a step further, which connect the subject with more depth or breadth in content.

To differentiate a content means to set unified educational goals for all students while introducing the same content with varied instructions and ways to make sure that each student has learned the new concepts, skills and attitude (Hall, 2002, p. 2). On the other hand, differentiating the process of learning means to let the students participate in varied activities to "make sense of the content" (Tomlinson & Imbeau, 2010, p. 15). Product differentiation is another factor that teachers can use to assess students' understanding at the end of every unit. Nevertheless, teachers afford students different ways to "demonstrate

what they have come to know, understand, and be able to do after an extended period of learning" (Tomlinson & Imbeau, 2010, p. 15).

Since students' population have different potentialities to understand the content, teachers are required to deliver the content, activities, or product in various ways with varied level of complexity. Teachers also administer pre-assessment to assess students' current understanding (Hall, 2002). Since, teachers consider the students' current level a pivotal point to keep the new learning occur within their proximal zone (Vygotsky & cole, 1978). Accordingly, teachers can set up certain expectations about the student's performance. Thus, teachers present the content, activities, and products, associated with varied levels of aid, depth and challenges. In order to allow students to build up identical understanding of the content (Tomlinson & Allan, 2000). Therefore, teachers can design the class in tiered activities which reveal varied level of complexity to meet each students' zone and use flexible group options to perform activities based on students' interest and current level of understanding. In which students can realize themselves in different settings (Tomlinson & Imbeau, 2010). Since teachers adjust students' work to correspond to their varied needs.

By scaffolding, teachers can teach students prerequisite content to follow with clear steps in order to conquer their weaknesses (Mariani, 1997), and to meet the learning expectations (Renzulli et al., 2005). Parallel to that, teachers allow students who have displayed mastery in a particular topic to move faster than their age group or alter the content for other students depending on their individualized instructional plan (Tomlinson & Imbeau, 2010, p. 15). Even though, some advanced students demonstrate mastery in one particular topic, they might not show the same progress in other parts of the course. For that reason, both dynamic assessment and scaffolding instruction are essential to check students' progress at any level (Hall, 2002, p. 2). In this instance, flexible grouping and time management are critical tools for both students who are struggling to master a content and students who can proceed to gain more depth in the content, as well. A wide range of options are available for students to demonstrate their understanding, but definitely all options target the learning goals by serving each student preferable way to acquire and process information (Tomlinson & Allan, 2000, pp. 9-10).

Hall (2002, p. 2) emphasizes the role of dynamic assessment for "teachers to better provide a menu of approaches, choices, and scaffolds for the varying needs, interests and abilities that exist in classrooms of diverse students". In which differ from traditional assessment,

what make the difference between traditional and dynamic assessment that in dynamic assessment the curriculum is modified according to students' evaluation, while in traditional testing, the assessment is following the curriculum. Since, students' abilities are acknowledged, therefore, dynamic assessment is more helpful to determine successful learning experience. This idea of assessment has been introduced through the idea of *planning backwards*, mentioned by McDonald (1992).

As teachers use strategies to differentiate the process, they also use such strategies to differentiate the product. By using different group options, teachers can use tiered product, for example, to design challenging tasks that are appropriate for students' zone of learning potential but are also slightly above their current level (Vygotsky & Cole, 1978). Teachers are considering students' readiness, current understanding and interest, which have an impact in completing the work. Simultaneously, teachers offer the appropriate scaffolding strategies to students with clear directions to let the new learning occur (Tomlinson & Imbeau, 2010, p. 16). Teachers consider a product is good when students become able to "rethink what they have learned, apply what they can do, extend their understanding and skill, and become involved in both critical and creative thinking" (Tomlinson & Allan, 2000, p. 9).

Tomlinson and Imbeau (2010, p. 15) stressed the impact of the emotion. Emotions have a significant influence on the cognitive processes including learning and problem solving. Positive emotions evoke students' engagement, motivation and confidence, and thus they play a fundamental role in academic success. For that reason, teachers utilize students' interests to differentiate instruction and turn their curiosity into real learning. Several mechanisms were proposed to help teachers create a joyful learning climate at school, such as: giving positive feedback on students' work, promoting cooperation instead of competition, and providing students with appropriate teaching instruction (Pekrun, Goetz, Titz, & Perry 2002, pp. 166-167). Together, these mechanisms support students' autonomy and boost their ability to self- regulate their emotions, behavior, stress and impulses mindfully. In this manner, it seems suitable to spark students' interest, since interest is considered a powerful contributor to students' motivation and engagement in learning (Tomlinson & Imbeau, 2010, p. 16).

As addressing students' interest is crucial to enhance their motivation, students' learning portfolio is necessary as well. Focusing on learning portfolio promote students learning by

selecting topics, activities, or products they found joyful and interesting, For example, students can select a topic and read about it independently or with a group, listen to an audio about this topic, discuss it with skilled peers, or make a search on the internet (Tomlinson & Imbeau, 2010, p. 15). While applying differentiation, learning profile is another aspect to be considered when teachers differentiate the curriculum. Tomlinson and Allan (2000, p. 10) categorized the learning profile into: learning styles and intelligence profile. Since students' approach learning in different ways, teachers can draw attention to variety of topics, activities and products that resonates with students' diverse needs. Teachers understand that students learn better while utilizing their preferred learning style or intelligences. These terms are not exclusive because some students might have superior style or intelligence, but intelligences seldom function in isolation of other styles. Instead, intelligences and learning styles operate simultaneously "concurrently and typically complement each other as individuals develop skills or solve problems" (Boneva & Mihova, 2012, p. 7; Brualdi, 1996, p. 3). In general, the learning profile guides the manner in which students learn in terms of styles and intelligences. There are three common channels in learning styles: visual, auditory and kinesthetic style (Boneva & Mihova, 2012, pp. 10-11). Whereas, multiple types of intelligences fall within seven categories as described by Gardner and Hatch (1989, p. 6): logic-mathematical, linguistic, spatial, musical, bodily kinesthetic, personal, and naturalist intelligence. All these intelligences are important to perform in the society, teachers should view all the areas of expertise as equally valuable (Brualdi, 1996). Teachers need to understand these styles and intelligences in order to make instruction effective and compelling in a way that reflects on the overall learning process in the class. Undoubtedly, applying learning styles and multiple intelligences leads to comfortable learning environment, in which students can choose the learning context that seems adaptive to their learning modes and makes them more able to recognize the best way to deal with content, process and product through the years (Tomlinson & Allan, 2000, p. 10).

As Tomlinson and Allan (2000, p. 12) acknowledged the role of leadership within differentiation, since differentiation approach is not an additive part but rather a manner of thinking that guides teachers through their teaching approach. In successful differentiation, teachers achieve professional growth. By acquiring the appropriate skills and competences, teachers are more likely to honor the differences that they foster with their students. Teachers become significantly more critical when they can encourage students' uniqueness

while respecting their diversity. Staff professional growth offers opportunities for teachers, whether beginner or experienced teachers, to evaluate the efficacy of their teaching instructions and encourage their reciprocity in doing so. Tomlinson and Allan (2000, p. 81) address the impact of engaging school practitioners and principal in developing their profession. In addition to that, it sheds light on the most beneficial forms of staff growth, such as "study groups, peer coaching, co-teaching, guided curriculum development and guided observation". Teachers' cooperation promotes a pedagogical discussion among teachers to ensure continuous and updating development. Consequently, teachers become far more skilled and experienced to extend differentiation to the maximum.

Despite its advantages, teachers can't recognize advanced students through differentiation easily without being familiar about their characteristics. As Renzulli (2005, pp. 8-9) viewed results of previous research about differentiation, in which confirm that little amount of differentiation is taking place at schools, for example, he cited (Westberg et al., 1992) who conducted an observational study for 92 days and found that: "high-ability students experienced no instructional or curricular differentiation in 84% of the instructional activities in which they participated". Likely, Renzulli cited another study (Archambault et al., 1992) who has deduced similar findings, in which "classroom teachers make only minor modifications in the regular curriculum". While in Finland, Laine (2016, p. 3) is concerned about whether the Finnish teachers are meeting the needs of advanced students through differentiation. They found that although Finnish teachers' conception toward differentiation are positive, they still don't apply significant adjustment to their teaching strategies to meet the variation levels in the class. On other occasions, Finnish teachers employ entertainment activities instead of mindful curriculum. For that reason, Laine (2016), Tirri and Kuusisto (2013, p. 9) have recommended the provision of extensive training for teachers to address the needs of advanced students adequately and encourage teachers to read journal articles that discuss issues related to the field of giftedness to improve their classroom skills in differentiation, since gifted education is not a prominent feature of teacher education. This can open more possibilities to help recognize advanced students in the heterogeneous classroom. Eventually, Laine, Tirri and Kuusisto emphasize on two factors that shouldn't be underestimated, which is: first, to ensure teachers' knowledge of gifted students' characteristics and provide training courses for teachers' professional growth. Second, build a positive attitude toward gifted education in the society.

Finnish teachers perceive acceleration and intellectual grouping negatively (Tirri & Laine, 2016) as they believe that acceleration functions by displacing the students from their original classrooms which might harm students' emotionally and socially (Rogers & Kimpston, 2002). Thus, Finnish teachers prefer to choose enrichment activities instead of acceleration, and cooperation instead of intellectual grouping. This negative attitude toward acceleration resonates with Brody' (2004) overview about implementation of acceleration/enrichment and intellectual/cooperative grouping in the final quarter of the twentieth century and their impact on students.

To serve academically able students, teacher can foster students to perform beyond their actual ability by considering two necessities, students' zone of potential learning with appropriate scaffolding instruction, in which extend students' engagement to proceed further in their learning. These two considerations constitute the theoretical part for this study.

2.5 Variation in the Conception of Giftedness:

Acceleration is one of the programs that might be offered to academically able students (Southern & Jones, 2004). Those students displayed mastery in one or more topic of the academic, as well as, personal capacity. Thus, teachers grant them accelerative access to advanced content when students meet specific criteria (Renzulli & Smith, & Reis, 1983). In the past, teachers used the term "gifted" to refer to the individuals who scored high in IQ tests. Since, using IQ tests as a tool for educational comparison and job selection (Weinberg, 1989, p. 100). Recently, the definition become fluid with multiple understanding of giftedness (Sternberg & Davidson, 2005). This review will go through the historical angle of giftedness and explain the changes that happened over time.

In the early 20th century, intelligence was captured heavily by quantitative measurements such as IQ test. According to Weinberg (1989, p. 100), IQ that quantify the general intellectual capacity, started being used by Binet as a standard for gaining national economic progress through job satisfaction to obtain more productive society. The aftermath of adapting IQ test within formal schools, increases individual enrolments from different socioeconomic backgrounds. Towards the end of the twentieth century, the contemporary approach of giftedness had questioned the adequacy of IQ tests. For example, Piaget (1972) disagreed with the idea that individual development could be

equated to a fixed number such as IQ scores, instead Piaget proposed the idea of several stages of personal development. Which viewed the cognitive capacity as a consequence of personal maturation that occurred through the adaptation with the surrounding environment. In alike vein, Vegotsky contradicted the use of IQ test, because it measures a limited level of individual development. Whereas, any individual has additional learning potential when obtaining appropriate aid from adult, in which reflects Vygotsky's idea of "Zone of Proximal Development" (Wertch, 1984, p. 7; Vygotsky & Cole, 1978). Where the inadequacy of IQ test remains in only reflecting the current level of individual development and neglect the individual's zone of potential learning. For that reason, the concept of IQ test expanded further by adding more cognitive components, in which still reflect individual intelligence through the psychometric measurement (IQ). Then, the concept takes new direction with multiple intelligence theory that had a view on quantifying individual intelligence through test, since the test emphasis on verbal and mathematical abilities. Gardner's view (Gardner & Hatch, 1989, p. 6) highlighted musical as well as intrapersonal intelligences that used to be neglected by the traditional understanding of intelligence. Moreover, Renzulli (2002) acknowledged the role of creativity and commitment to understand giftedness, since these characteristics contribute to influence one's work and development. In addition to that, Sternberg (Kaufman & Sternberg, 2008, p. 77) underscored wise thinking as an essential characteristic in gifted behavior, since wise decision does not require high scores in IQ test. Therefore, the concept of intelligence/giftedness had shifted from one single perspective, such as the determination of individual mental ability using IQ test, to multiple perspective toward the field of giftedness, that serve different talents. Until now, there is no superior model that become dominant. The emergence of a variety of models can prove the complicated structure for giftedness. To spotlight the development process for each student in order to reach his/her max potential, the need for gifted programs that consider individual's intellectual capacity without the need to characterize the students as gifted (Sternberg & Davidson, 2005). Here, the study avoids using the term 'gifted' to describe individual high ability, instead it uses the terms academically able or advanced students.

Gifted programs are designed to meet the educational demand for academically able students. The importance of adapting gifted programs at school, such as academic acceleration and enrichment, is to keep academically able students well-served. Since these programs provide the relevant challenge to keep the students completely engaged (Renzulli

& Smith, & Reis, 1983). Thus, school provide the opportunity for the students to thrive while reducing students' early drop-out from school on the basis of bored curriculum (Renzulli & Park, 2000). Where issues such as repetitive contents with slow learning pace can impact academically able students' motivation, interest, and attitude toward learning negatively, or even hold them back. For that reason, Renzulli (2014) proposed an enrichment model that allow all the students to gain advanced material as a general intervention, and provide opportunities to students to follow up their learning with more depth learning in specific topics on the basis of their intellectual capacity or great interest. Where every student can participate in pleasing, challenging, and interesting learning activities to develop their personal and academic competences.

As inclusive education expects teachers to meet diverse students' needs, including the academically able students. This model afford an opportunity to meet this purpose, in which constitute a shared ground with inclusive education, since the fundamental aim for this model is "the development of a total school enrichment program that benefits all students and concentrates on making schools places for talent development for all young people" (Renzulli, 2014, p. 545).

2.6 Acceleration:

This section will cover the body of the research related to academic acceleration. Both Acceleration and enrichment' definition could vary from one setting to another, here, enrichment is part of acceleration based on Southern' and Jones' study where acceleration includes a group of types to meet students' diverse needs (2004, pp. 5-6). Because teachers still have negative concerns toward implementing acceleration, even though findings from many studies indicate that acceleration was associated with positive outcomes when students' academic, emotional and social competencies are considered (Rogers & Kimpston, 1992; Renzulli & Reis, 2004; Siegle, Wilson, & Little, 2013). This section aims to clear up two main misunderstanding regarding acceleration held by the majority of teachers. The first misconception is teachers' concerns about the socio-emotional impact of acceleration and the second misconception is the belief that acceleration only represents one form, which is grade-skipping (Rogers & Kimpston, 1992, p. 59). To be clearer, here, the purpose is not to show preference for acceleration over enrichment, or intellectual

grouping over cooperation since both of them are considered beneficial strategies to serve students' diverse needs.

Acceleration is defined officially as "progress through an educational program at a rate faster or at age younger than conventional" (Southern, Jones, & Stanley, 1993, p. 387). It is an advanced educational intervention that can be offered to accommodate academically able students and help them to achieve a continuous learning progress. Through acceleration, teachers can avoid the repetitive content by substituting it with instructions related to advanced learning (Stanley, 2000, p. 216). The purpose of providing accelerative option is to 'match the level, complexity, and pace of the curriculum' with students' differences (Lohman & Marron, 2008, p. 3). The term 'academic acceleration' refers to a number of types that could be arranged into two divisions, *content-base* and *grade-base* acceleration: *content-base acceleration* means that the student can engage in more advanced materials and understanding of certain areas earlier than his/her age level. In that manner, *content- base acceleration* equates enrichment pedagogy, even though it is part of acceleration (Gagné, 2007, p. 105). On the other hand, *grade-base acceleration* means the student can shorten the number of years spent in school system in order to attend high school or college at an earlier age (Rogers, 2004, p. 47). Within this description, eighteen flexible types were described based on Southern' and Jones' literature (2004, pp. 5-6). This section will discuss fourteen types which are related to the primary stage of schooling. Primary school is the focus of this study.

Content-base includes these types (Southern & Jones, 2004, pp. 5-6):
1- "Subject-matter acceleration": This type is like pull-out model; it includes different patterns. For example, when the student proves proficiency in a topic, the school allows the student to join the class of that topic with higher-grade level peers twice a week, then he/she can return to his/her original class. Another scenario can happen as the student can stay with his/her peers and engage in advanced content as a continuous progress, in which it becomes like enrichment. Besides, the student can also access advanced materials by joining outside-school activities, such as: summer school-camp, enrichment activities or international competition.

2- "Curriculum Compacting": means that for students who have already mastered an area of content, teachers will eliminate instructions related to that content and make the most of the extra time by providing challenging alternative activities based on pre-multi-assessment process. Streaming and ability grouping are helpful strategies to serve these students to engage in enrichment content. To gain an advanced grade level is not essential in this strategy.

3- "Mentoring": in this case the student will work with expert tutor as one-to-one relationship in order to receive additional support and rapid advanced instructions.

4- "Extracurricular Program": students who demonstrate outstanding performance could participate in this program where they benefit from the extended curriculum after school and gain credit.

5- "Corresponding Courses": extra courses and instructions can be delivered to the students by different means, for example: e-mail, internet and tv-broadcast.

6- "Dual enrollment": a student who demonstrates a successful accomplishment in a specific area of content, for example math, can be supported with a strategy to earn a high school credit while he/she is still in primary school.

7- "Credit by examination": students whose portfolio and the final exam displayed a mastery for educational themes can move ahead and enroll in completing standardized tests or activities to gain high school or college credit.

Grade-base includes these types (Southern & Jones, 2004, pp. 5-6):
1- "Early admission to first grade": the child who displays mastery in basic skills and shows signs of motivation to join school is admitted to first grade without going to preschool.

2- "Early Entrance to Middle or High School": when the student has shown the ability to fulfill the educational requirements earlier than his/her peers and got an early admission to middle school, thus finishing primary school in four to five years rather than six years.

3- "Grade-skipping": when the student is given an advanced placement regardless to one's age-peers in the school.

4- "Telescoping Curriculum": this strategy is like Curriculum Compacting, as students are provided instruction in less time than is typical (for example, students complete one-year curriculum in one semester). Telescoping can be

distinguished from Curriculum Compacting in that it results in students' placement in advanced grade.

5- "Combined Classes": this strategy allows a mixed- grade level, where students can interact with older peers socially and academically, even though this type of acceleration may or may not result in students moving up to an advanced grade.

6- "Continuous Progress": This educational strategy offers advanced and sequenced continuum of materials connected to the core curriculum requirement. Once the students have mastered the previous one and shown a significant progress comparable to their chronological peers, s/he can pursue to advanced content.

7- "Self-based instruction": this option is a sub-form of Continuous Progress, where the students decide to proceed and go through learning and didactic activities based on his/her own pace.

It always seems that the age and socio-emotional issues drive teachers to prefer enrichment over acceleration (Brody, 2004). Although both of them have the same pedagogical objectives, the procedures are different (VanTassel-Baska & Stambaugh, 2005). Based on the previous types, acceleration focuses on the extra time in order to help the student move up faster than usual because s/he can handle the courses of advanced level. While some students might view acceleration as an ideal situation, other students might resist this change because of uncomfortable emotions (Rogers & Kimpston, 1992, p. 59). Therefore, teachers should consider students' personal and academic competence to make a decision about acceleration (Rogers & Kimpston, 1992, p. 59). Enrichment is another effective way to serve all the students. Compared to acceleration, it follows a different method where it focuses on digging deeper and extending the learning experience beyond the common content while students remain with their age group most of the time (Wu, 2013, p. 2). In this study, enrichment is considered as part of acceleration. Since both options can be viewed as accelerative entry whether students are exposed to advanced content earlier or dive deeply in a particular content (Siegle, Wilson, & Little, 2013, p. 27). Enrichment mandates teachers to be professional and skilled in adjusting the content, activities and products, in varied levels for different students (VanTassel-Baska & Stambaugh, 2005). Despite the proven advantages of both strategies, they are not implemented without potential drawbacks. Regarding acceleration, teachers can shrink the content for the student

through compacting, but teachers should be aware that the accelerant student didn't miss any valuable content, while s/he is moving up across different grade-level (Rogers & Kimpston, 1992, p. 58). Therefore, long-term planning by teachers is a crucial step along with appropriate scaffolding and dynamic assessment to evaluate the student relevantly (VanTassel-Baska & Stambaugh, 2005). As for enrichment, teachers need to use various strategies to stretch students' thinking, to ask questions that foster students' curiosity for exploration, and nurture students' strengths and interests instead of focusing on pointless work to keep the students busy (VanTassel-Baska & Stambaugh, 2005). Based on the available factors, teachers can decide the suitable method for each student, since the decision is not only solely dependent on teachers' opinion, but also related to other factors such as flexibility of the school's schedule in providing individualized programs for students (Renzulli & Smith, & Reis, 1983, p. 191). A supportive school policy is critical for incorporating acceleration/enrichment strategy within the school's district since clear and well-defined school policies promote successful implementation of acceleration. According to Colangelo and his colleagues (2010, pp. 10-11), the policy can address four main aspects: first, acceleration is accessible to all students regardless of their gender, socioeconomic background, nationality, race, and disability. Second, acceleration should be comprehensive in order to identify the students who might be at risk and thus need appropriate challenge and instruction to tackle the problem of underachievement and boredom. Third, the use of appropriate tools to evaluate students' performance in order to assess students' differences. Fourth, parents' involvement and the presence of open channels between the school and parents are critical to inform the procedures and policies which make acceleration forms well organized and accessible to reach and understand. Moreover, the infrastructure factor can impact the decision about acceleration, since the location of the secondary school is also important to facilitate students' double enrollment in primary/secondary school (Colangelo et al., 2010, p. 10). All these aspects provide challenges to teachers and the school to be considered for effective implementation.

Academic acceleration has been covered extensively in the literature Van Tassel-baska (cited in Siegle et al., 2013, p. 29) including the intellectual needs of individuals (Olszewski-Kubilius, 2004), the social and emotional benefits (Neihart, 2007), and the overall positive impression on different real life's phases (Swiatek & Benbow, 1991).

As students' performance varies, every type of "acceleration had a very different pattern of academic, social, and psychological outcomes for students" (Rogers & Kimpston, 2002, p. 59). Acceleration is a powerful option to fulfill students' individual needs, especially

for students whose performance falls dramatically when they are required to do routine work at a routine pace (Kulik, 1992, p. 15). When acceleration is a powerful tool to differentiate the curricula for both students who are high achievers or underachievers, since it provides opportunities to foster their motivation rather than wait and let their abilities to languish (Sternberg, 2004, p. xv). It appears that some students are underachievers because they are lazy and unmotivated although teachers can recognize their potentiality. Emerick (1992) described a reverse strategy, where teachers can take the chance to reverse students' loss by giving them more attention through appropriate challenge, high expectation, and supportive feedback. In this way, students can improve their self-acceptance and achieve positive outcomes in their school performance (Emerick, 1992). For that reason, acceleration is considered as a powerful intervention to boost students' motivation and self-satisfaction. Eventually, to guarantee matching students with the appropriate type of acceleration, schools should provide adequate counseling and family engagement (George, 2003, p. 64; Rogers, 1992, p. 61) and follow clear acceleration/enrichment policy (Colangelo et al., 2010).

Advantages of acceleration and its role in stimulating students to reach their full potentials have been widely studied in the literature (Gagné, 2007, pp. 105-106; Brody, 2004). Rogers and Kimpstom (1992) analyzed several researches concern different types of acceleration, one type is *early entrance* to first grade which seems to be a safe option for advanced students in most of the cases. Regarding *grade-skipping*, students who skip a full year between the third and sixth grade-levels showed academic and social advantageous. Whereas, students who experience *curriculum compacting* in math showed distinctive academic results, but no social differences appeared. Another study focuses on a group of advanced students who were accelerated through *Grade Telescoping* type, in which it enhanced students to complete three years schooling in two years. The results showed academic gains with no social or emotional harm. Rogers (1992, p.59) examined eighty-one studies about acceleration and noticed that the social and emotional consequences of the majority accelerative types are positive and the limited negative effect is associated with graded environment. Non-graded or dynamic assessment was found to cause no harm on the social and emotional benefits. Similarly, Neihart (2007, p. 330) found a positive impact from acceleration when the child is nominated according to the academic and socio-emotional competences. In recent times, it seems to be a consensus to use multiple assessment procedure to assess students' differences rather than focus solely on IQ or high stakes testing (Sternberg, 2004, p. 9).

Therefore, teachers can encourage the use of acceleration in both homogeneous and heterogeneous environment within the same school. Both settings are important to be available, since they have complementary gain for optimal students' development. This can enhance a wider flexibility in learning opportunities for all students who either have academic or non-academic traits (Fink, 1992, p.44-45). For more details, Fink (1992) encouraged the use of dynamic grouping within the classroom rather than the use of one fixed structure. To enhance students' intellectual competence, a process called cluster gathering is highly considered. It allows the teachers to approach each student with depth materials by varied levels of challenge/aid. Students who have displayed mastery in a particular topic in a short time, teacher can compress the topic that has been fully understood and replaced it with new content. Thus, teachers want to adjust the materials and instructions for each student until s/he become able to perform independently (Gentry, 2014). Therefore, to group the students in clusters for intellectual development is not enough on a sole base. Advanced students need to feel that they are welcomed among their peers and be able to participate in cooperative group to thrive. Therefore, Fink (1992, p. 45) used the term 'academic controversy' to describe that high academically able students are more likely to engage in higher mental thinking when working in a cooperative group with diverse students, rather than working in a competitive setting or with themselves all the time. Consequently, nine types of acceleration can fall into this category which include "subject-matter acceleration", "curriculum compacting", "mentoring", "extracurricular", "corresponding courses", "dual enrollment", "credit by examination", "early entrance", and "combined classes" (Southern & Jones, 2004, pp. 5-6). The majority of them speak to enrichment methods. However, this does not give an indication of the inadequacy of the other types, instead it calls teachers attention to point to the challenges that students might face, especially when acceleration is granted to a single student, such as making new friendship when joining the upper grade-levels (Rogers & Kimpston, 1992, p. 59). Where teachers can encounter such issue through counseling (George, 2003), since some students are personally and academically ready to join upper grade-level.

In summary, teachers have a group of options to choose from while keeping in consideration that there is no ideal type that fit all the students. For that reason, teachers should deal with each student as a particular case, since some students might thrive by acceleration and other students by enrichment (Neihart, 2007). To experience both options, Renzulli and Reis (2002, p. 19) proposed a model called '*school wide enrichment model*'

which is "an organizational plan for delivering enrichment and acceleration through an integrated continuum of services. … The model also includes a broad array of specific grouping arrangements based on commonalities in abilities, interests, learning styles, and preferences for various modes of expression".

2.6.1   Twice exceptional students:

To enable teachers to deal with students who own both remarkable skills in specific academic areas along with unique educational struggles, teachers should alter their teaching strategy in which challenge and aid are appropriately addressed (Moon & Reis, 2004, p. 117). Even though, those students tend to be emotionally unstable, show very low self-efficacy/motivation and short attention span in addition to their learning difficulties (Moon & Reis, 2004), they also have outstanding intellectual capacity with profound creative skills. This inconsistency between two exceptionalities, strength and vulnerabilities, negatively impact the way teachers perceive them. Students who manifest both characteristics, high aptitude and disability, simultaneously are called: "Twice-Exceptional" students (2e) (Moon & Reis, 2004, p. 109). To better accommodate these bright students with disabilities, teachers should make distinctive efforts by customizing the class material to fulfill their strength, while simultaneously, focus on teaching them a series of '*compensatory*' and '*systematic risk-taking strategies*' to overcome their weakness (Winebrenner, 2003; Neihart, 1999). Accordingly, supportive school environment in which teachers show cooperation and willingness to meet the needs of students with 2e are vital to promote students' (2e) difference in education and to build a positive attitude toward diversity among the whole class (Winebrenner, 2003).

Teachers can offer the opportunity to allow student (2e) to experience more challenging material with enrichment or acceleration. Simultaneously, teachers who encourage students (2e) to attend classes to remediate their weaknesses by scaffolding strategies. It sometimes become difficult for the teachers to identify students (2e), since their characteristics decrease their chances to receive enrichment or acceleration programs, similar to other academically able students (Moon & Reis, 2004, pp. 109-110). Since, these students face unique challenges, the identification process has broad methodologies. Where teachers can aid students (2e) through scaffolding, enrichment and acceleration. Because these strategies together can address students' weaknesses, as well as, strength. Teachers can grant students advanced courses in academic areas of mastery as a promising

intervention to sustain their engagement while handling students' weaknesses by scaffolding (Renzulli & Reis, 2004). In general, teachers consider the educational inconsistency as a great indicator to nominate them as student (2e). To make a brief look at their educational inconsistency, students (2e) usually give negative impression about themselves, because they are unable to understand the reasons behind their struggle in real situations, while they are intellectually capable. As a result, they become emotionally intense, highly frustrated, unmotivated, and disruptive (Moon & Reis, 2004, pp. 109-110). In addition to that, some students (2e), often perform as average students, thus teachers don't recognize their impairment nor their advanced skills. These masked giftedness and disability would in turn decrease students (2e) chances for getting appropriate educational program at advanced school stages (Moon & Reis, 2004). For that reason, teachers who notice the significant inconsistency in their students' characteristics can promote the process of identification. In a similar manner, some schools combine the educational inconsistency with IQ test to demonstrate more clues for nomination (Montgomery County Public Schools, 2002, p. 2). On the contrary, Renzulli and Reis (2004, p. 6) developed an alternative method of identification, which is "tightly program-connected", rather than the traditional procedure that emphasize on IQ test. Which seems problematic because of its limitations with special-needs students. Their model is based on five stages, which work better with targeted groups and deal with them as private cases, in order to identify them as students (2e) and enroll them in the appropriate programs, such as enrichment or acceleration. The latter process of identification reflects the core of Vygotsky's (Vygotsky & Cole, 1978) dimension about cognitive development, since Vygotsky criticized the use of IQ tests and advocate for social communication with adults to make the new learning occurs. Vygotsky's idea has presented an alternative model in education for teachers to follow through the *'zone of proximal development'*. Instead of using IQ tests that measure the current level of the student, teachers should focus on" how he (the child) can become what he not yet is" (Wertch, 1985, p. 67). Whereas, Moon and Reis (2004, p. 110) also provide a list that can distinguish the characteristics of advanced students with learning difficulties or physical impairment. By understanding their characteristics, teachers can change the way they perceive students (2e) rather than base their expectations on the level of students' disability (Winebrenner, 2003, p. 132). Furthermore, teachers can also consider peers and parents nomination to assist them as another available source for the identification process. But for truly final decision, teachers give special attention to IEP group (Individual Educational Plan) who could provide the student (2e) with an individual

plan consist of: the appropriate kind of challenge/aid that might fit her/his zone of learning potential (Montgomery County Public Schools, 2002, pp. 1-2).

There is a multitude of strategies available to instruct and support students (2e), such as compensatory skills, which include physical exercises, gradual steps associated with timeline, sensory structure involvement (Winebrenner, 2003), and risk-taking skills (Neihart, 1999). Thus, it becomes a necessity to make students (2e), in general, handle their age-group work successfully, because it offers opportunities for them to contribute well with peers, community, and the whole society. As a result, Winebrenner (2003, p. 132) underscored the role of education to empower them, where teachers should "teach them the way they learn" not the way they have "repeatedly failed". This strategy encourages teachers to shed light on students' strengths, instead of only insisting to do one-way differentiation. As advanced students require more challenges/aid at school, also students (2e) want that too. Therefore, to understand Winebrenner's (2003, p. 133) rule in teaching students (2e), which is: "never remediate students' weaknesses until you first teach to their strengths!". Mindfully, teachers can emphasize on students' (2e) strength to lift up their weakness and abandon pointless work and substitute it with meaningful strategies. For that reason, teachers want students (2e) to learn at their own pace, but to make the process manageable, they can start by selecting one topic and target one group of students who display mastery in a topic (Renzulli & Reis, 2004). In that way, teachers can address students' understanding, skills and attitude, but allow varied manners for students (2e) to take place (Tomlinson & Allan, 2000, p. 9). This strategy enables teachers to perform authentic evaluation of students' progress (Tomlinson & Imbeau, 2010, p. 16). It is not an easy process to match students (2e) with relevant educational programs and incorporate acceleration unless teachers initiate several steps to ensure students' (2e) success. Several strategies were proposed by Winebrenner (2003) and Neihart (1999) to recompense for students' (2e) loss and better prepare them to become resilient in terms of handling their difficulties and reaching their zone of learning potential (Moon & Reis, 2004, p. 117). One of those strategies is teaching students (2e) physical exercises that promote their ability to master a skill. Based on educational neuroscience, such exercise help students (2e) to keep focused, avoid hesitation, and reduce repetition. In addition to that, teachers can make success attainable for them by breaking down the long-term goal into small set of steps, each step could be aligned with scaffolding strategies and a credit at the end-line (Winebrenner, 2003, p. 134). In general, teachers reward students' academic credits in order

to expose them to advanced courses, since these academic credits are considered as a way to prove students' prior knowledge of mastery in a particular topic. During this process, teachers usually expect to use scaffolding strategies in some areas while accelerate the same students in their area of mastery. Regarding students (2e), they can learn how to develop persistence and empower their ability to manage their emotional distress (Moon & Reis, 2004, p. 111). It is also powerful for teachers to involve the sensory structure during the lesson, for instance, '*experiential learning*' activities facilitate their understanding from "the concrete to the abstract" level, in order to make the content easier for the students to master (Winebrenner, 2003, pp. 134-135). To go beyond the external identification of an individual's strength, internal growth is essential as well (Neihart, 1999). Actually, the utmost learning occurs only outside the individual's comfort zone. In which can occur with teachers help, as Vygotsky (Wertch, 1984, p. 7) explain it with the term the "*Zone of Proximal Development*". Where teachers can encourage students to take risks in order to help them learn to pursue accomplishment, it will not only help teachers in their profession, but it may create new capacity of maturation. Teachers don't gain from risk taking without doing it in a systematic manner. Indeed, they can't persuade students to initiate the risk without being a good example to be imitated. For that reason, Neihart (1999) encourages teachers to be successful risk-taker by illustrating on the orderly five steps in order to teach students to overcome their fears, or deal with the difficulties that come in unexpected ways during life situations. Particularly, it seems normal for students (2e) to face different categories of risk, such as: intellectual, social, emotional, and physical risks (p. 290). Since "risk-taking contributes to increased self-confidence, skill mastery, changes in attitude and beliefs, and goal achievement" (Neihart, 1999, p. 291), teachers should motivate students to make a leap outside their comfort zone by supporting them to master these strategies. Moreover, teachers need support in their mission to drive the learning forward. The support they need falls into three categories: first, have support available, it is necessary to involve school's counselor and psychologist since ongoing communication and collaboration can help teachers to address students' needs, including students (2e) (Moon & Reis, 2004, p. 110). Second, teachers' professional growth is cultivated through cooperation and reciprocity, since pedagogical discussion can promote teacher's reflection to advance the process of learning and teaching to the best possible. Third, incorporation of extra resources and devices can be assistive to make education count for students (2e) and save teachers' time (Winebrenner, 2003, p. 137).

Consequently, personal and academic development are more apt to take place as long as students (2e) are engaged and interested in their learning process. Indeed, students' self-esteem can be built in flexible supportive environment, "in which their mistakes and struggles, as well as their successes, will be allowed and appreciated" (Winebrenner, 2003, pp. 136). Accordingly, students (2e) who become more confident, are more empowered to participate in acceleration or enrichment (Moon & Reis, 2004, p. 111). For this reason, it is highly important to discover students' strength at early stages because students (2e) have social or developmental disabilities that might mask their gifts and great talents. Identifying students' strengths and providing instructions that capitalize on these strengths and interests offers a great opportunity for boosting their motivation to stand out (Moon & Reis, 2004, p. 115).

3. Theoretical framework

This chapter will give a closer view of the Zone of Proximal Development (ZPD). Hence, learning within the ZPD stresses two aligned aspects: to challenge the students within their ZPD in order to keep them motivated (Renzulli, 1978), and then provide them with sufficient support to make the new learning occur (Vygotsky & Cole, 1978). Teachers plan the material to meet each student educational demand by managing the task in multiple ways based on students' interest, readiness and learning profile (Tomlinson, Brighton, Hertberg, Callahan, Moon, Brimijoin, & Reynolds, 2003). This pedagogy is called differentiation. Then comes the teacher's role again to intervene and provide the necessary steps of support, which is temporary and varies from one student to another. This organized sequencing of support is called scaffolding (Larkin, 2001). Indeed, both of differentiation and scaffolding are managed through meaningful social cooperation in class.

An alternative approach of knowledge acquisition in learning has been derived from the ZPD by using effective intervention to accommodate diverse students' needs in a homogenous classroom (Kozulin, 2003, p. 16), such as: scaffolding (Rodgers, 2004) and differentiated instruction (Tomlinson et al., 2000). A combination of both strategies can

enrich the teaching approach to ensure that the needs of diverse students are being met. Recently, Finnish primary schools are having more diverse population of students than before, such as: immigrant students, students with special needs, students with high academic interest, students whose first language is not Finnish or English and students with different socio-economic background, and others (Tomlinson et al., 2003). In addition to that, Finland's educational policy that focuses on inclusive education is dismissing gifted education from its agenda (Tirri & Kuusisto, 2013). This study focuses on meeting the needs of advanced students who is still not distinguished, because they are unmotivated and underachievers, through presenting the teachers with modified modes of instruction to fit with the students' learning pace. Since the learning and teaching setting is full of complexities, where neither teachers can fulfill their mission easily within their profession, nor the slight modifications in the mode of instruction are enough to meet all students' needs (Tomlinson et al., 2003). Some students are very distinguished because of their high achievements, and they become ready to pace their learning and want to proceed in a more advanced curriculum, while the other might be left unnoticed because of boredom, which might also lead to misbehavior (Renzulli, Smith, & Reis, 1983, p. 97) To maintain students' engagement in learning, adequate challenge is necessary (Feldhusen & Kroll, 1991). Therefore, the lack of challenging material for advanced students can be tackled by the process of combining differentiation and scaffolding (Renzulli & Reis, 2004). Otherwise, students' motivation and attitude toward learning will be hindered. For that reason, students need teachers' aid in order to have an active role in their own learning (Mariani, 1997). A combination of differentiation and scaffolding, two different strategies induce the same learning objective. In which to differentiate the lesson means that teachers give the students tasks entirely different from one student to another to acknowledge their individual differences (Tomlinson et al., 2003) While, scaffolding is to break up the whole lesson into small chunks associated with a "systematic sequencing of prompted content, materials, tasks, and teacher and peer support to optimize learning" (Larkin, 2002, p. 1). Where students become able to perform beyond their ZPD. Accordingly, students become more engaged and independent in their own learning. It is well worth to have a close look about scaffolding after defining the Zone of Proximal Development. Since differentiation is mentioned previously.

3.1 The zone of proximal development

This chapter provides insight about Vygotsky's learning theory, particularly, the 'zone of proximal development' (ZPD) (Vygotsky & Cole, 1978, p. 71). This theory is one pillar that captures the essence of Vygotsky's philosophy about the psychological and educational growth of the child at school. The sociocultural theory bridges between the cognition of individuals with their cultural and social grounds. To understand how schools can function well and become a convenient place to stimulate and engage students effectively, two generative assumptions form the foundation in Vygotsky's (Vygotsky & Cole, 1978) learning theory. The first assumption conceives that human cognition is originated in social interaction, and the second considers that students' mental growth relies heavily on the presence of mediation, which can come in two forms. The first of these forms is through a person who intervenes between the students' communication and the surrounding environment, and who is called the "More Knowledgeable Other" (MNO) (Abtahi, 2017, p. 35). The second form is mediation through a systematic learning model such as scaffolding (Kozulin, 2003, p. 17).

Mainly, the basis for knowledge formation starts as a social interaction between the child and his/her parents, then develops over time with the surrounding community, which gradually integrates the growing individuals who develop awareness of the minds' habits of that particular group they live in (Kozulin, 2003, p. 1). Consequently, the individual's' role, behaviors, language and skills are shaped through the daily social interaction with others. Vygotsky (Wertsch, 1985, p. 60) marked the social and psychological capacities of child development: the social capacity reflects the quality of the social-individual interaction that occurs in the interpersonal capacity, which in turn will be internalized to form the mental process in the intrapersonal capacity. This is illustrated in his law, which is called "*general genetic law of cultural development":*

"Any function in the child's cultural development appears twice, or on two planes. First it appears on the social plane, and then on the psychological category, and then within the child as an intrapsychological category." (Wertsch, 1985, p. 60)

Walqui (2006, p. 160) proposed five elements that echo the essence of Vygotsky's theory: 1) "learning precedes development". 2) Language is a critical tool. 3) Mediation plays a central role in learning. 4) Learning takes place first through social interaction then it

internalizes in the cognitive level. 5) The ZPD, a "functional methods of double stimulation" (Vygotsky & Cole, 1978, p. 74).

I will discuss these five elements in a collective manner rather than separately, since explaining one of them requires the involvement of the others naturally. Vygotsky (Vygotsky & Cole, 1978, p. 81) proposed a new dimension to approach development that is neither linear nor simplistic, in which Vygotsky focused on the cognitive development through the ZPD or "how he (the child) can become what he not yet is" (Wertch, 1985, p. 67). This dimension sheds lights on the basics of development of the mental activity (intrapsychological level), which is the social interaction that takes place in formal and informal dialogue with other, contradicting Jean Piaget' idea that child development must precede their learning (Piaget, 1972). Vygotsky frankly opposed the behaviorist' core about learning and development, which rely on habit formation and the way these habits are learnt (Vygotsky & Cole, 1978, p. 81), thus challenging the behaviorists' claims to emphasize the role of social communication through teaching arrangements within the student's ZPD.

Moreover, Vygotsky (Vygotsky & Cole, 1978, p. 27) stressed the role of speech to form intellectual competences. Language and other cultural tools are pivotal to internalize the new skills and knowledge through social conversation, since the cultural tools reflect the interaction that occurs across the family, school and society levels. language is therefore not just a tool mediating communication and dialogue, but also a source to form personal rational thinking (Kozulin, 2003, p. 17). In addition, teachers and peers are considered agent mediators who participate social patterns within the interpersonal capacity in order to transmit these patterns and skills to the intrapersonal capacity. Students become more capable to achieve more difficult exercise with school's practitioners' and peers' aid. Therefore, through cooperation and instruction (Kozulin, 2003, p. 17), teachers can boost the learning experience to the optimal by facilitating cooperative activities aligned with relevant aid, where students can internalize the new verbal and nonverbal skills used through their reciprocal relationship to solve a problem. Then such skills and information will be accommodated in the cognitive level to be used later independently as Vygotsky (Vygotsky & Cole, 1978, p. 57) states:

"An interpersonal process is transformed into an intrapersonal one. Every function in the child's cultural development appears twice: first, on the social level, and later, on the

individual level; first, between people (interpsychological), and then inside the child (intrapsychological)".

The (ZPD) has deeply impacted the teaching process, since it captures the dynamic nature of learning at school by realizing a new way to approach students' development. For that reason, Vygotsky (Wertsch, 1985, p. 67) underlines two traditional dilemmas in educational psychology: 1) the IQ test that was embedded at that time to assess students' intellectual competences, and 2) the role of applicable instruction in providing opportunities to close the gap in individual differences. Vygotsky (Wertsch, 1985, p. 68) emphasized the limitation that is adherent in IQ tests, which only capture the current level of student development and ignore student's learning potential in the future. The second concern emphasizes the relationship between instruction and development, for when teaching instructions are formed to match the ZPD for each student, optimal growth can be attainable within the intrapsychological level of the student (Wertsch, 1985, pp. 70-71). As Vygotsky stated "Instruction is good only when it proceeds ahead development. Then it awakens and rouses to life an entire set of functions which are in the stage of maturing, which lie in the zone of proximal development" (Wertsch, 1985, p. 71). Hence, teachers can manage students' progress through dynamic assessment, in order to offer the relevant aid required to challenge the students' learning (Lidz & Gindis, 2003). Students' cognitive growth and meta-cognitive thinking entail teachers to offer appropriate, challenging activities corporate with individualized instructions that aim each student's zone nudging for more cognitive growth (Cannell, 2004, p. 16). Therefore, competent teachers (MNO) organize the communicative and the cognitive capacities through modeling, observation, feedback, reflection and appropriate aid (scaffolding) to make the learning experience vital (Kozulin, 2003, p. 2). One aspect should be kept in mind, is that Vygotsky stressed the requirements for true social reality which is critical to approach development that he called "mature cultural forms of behavior" (Wertsch, 1985, p. 63). Therefore, not all social relations are pivotal for such maturity, but when students are engaged with mental and emotional experience, they become more likely to engage in higher mental activities, where each student becomes able to bring his/her own understanding or knowledge to participate in higher order thinking. Although many educators have realized this experience before, Vygotsky framed it through the ZPD (Wertsch, 1985, p. 67). The ZPD is dealing with the intrapersonal capacity that is growing but has not yet been polished. Every student goes through two scopes of development within the ZPD. The first scope can be viewed by the

improvement that the student can master by his/her own ability without adults' aid, while the second scope describes the potential of a student's progress that is feasible by teachers and peer's assistance. The variation between the two scopes is called The Zone of Proximal Development (ZPD) (Vygotsky & Cole, 1978, p. 86). The nature of the ZPD promotes the emergence of scaffolding techniques that echo the core of effective teaching on the one hand and encourage the students to go beyond their abilities to accomplish their educational goals on the other.

Within the literature, scaffolding, a new term was used interchangeably with the ZPD, and reflect the same foundation. To make scaffolding successful at school, it should meet the social and the cognitive capacity for each student. This usually requires teachers, who possess higher competences (MNO), to adjust their instructions to fit well with the student's 'zone of proximal development' through meaningful social communication (Borthick & Jones, & Wakai, 2003, p. 107). The metaphor of scaffolding is deduced from the temporary structure that builders use to surround a new architecture work in order to let it support itself. Then, scaffolding is removed gradually after the new architecture becomes stable and can stand by itself (Hammond & Gibbons, 2005, p. 8). Since this metaphor has been adapted to education, teachers have become keen to aid their students to close the educational gap within students' differences., scaffolding is mainly used to reflect the aid provided by the teacher, as Puntambekar and Hübscher (2005, p. 1) mentioned "the scaffolding construct is increasingly being used synonymously with support". Mariani (1997, p.4) suggested a framework that considers the relational aspect between two dimensions: aid and challenge. In order to address teaching approach appropriately, students want to be provided with greater challenging work that is ahead of their current zone of comfort, associated with appropriate aid to make the new learning occur. Otherwise, students who have highly challenging tasks with inadequate help are more likely to fail. The results of students who has unchallenging tasks associated with little help are more likely to feel bored and disengaged at class as well. Indeed, Lantolf and Thorne (2006) delved into the types of assistance through the teaching approach and tied students' development to the quality of the aid they are receiving. When the teacher intervenes and "reduces and simplifies learning to a lock-step process, [it] can have a constraining effect on student development" (p. 264). Whereas, teachers are able to sustain students' engagement through focusing on the learning experience as a process rather than task accomplishment (Mariani, 1997, p. 5). Furthermore, Stone (1998) argued for using the

term scaffolding with displacement from its original context. In his article, **THE UTILITY OF SCAFFOLDING**, he contends that scaffolding should be understood within its theoretical background, since it considers the students as active contributors to their learning rather than passive contributors. Like Stone's view, Maybin and his colleagues (1992) appeal for teachers to emphasize the role of dialogue with students through reciprocal interaction to optimize learning. To be strict to the point, this study relies on allowing the students to go through ongoing, high challenging content for advanced students who already mastered one or more areas in the study course planned for their age group, and who are ready to excel in deeper content in these particular areas. Those students require appropriate scaffolding instruction.

Generally, teachers can differentiate the instructions into two options: enrichment and acceleration. Both options can be implemented without specific criteria of identification, based on students' interest, ability and learning profile (Tomlinson et al., 2003). Within enrichment, the students remain in their classes and offered an opportunity to meet their educational demand and pursue their interest by engaging in supplement content, which is deeper and broader than the original content. While acceleration gives the students the opportunity to proceed faster in curriculum through different forms, such as: early entrance, curriculum compacting or skipping a grade- level (Brody, 2004). So, teachers can provide ongoing aid to benefit the whole class, as well as, the advanced students by scaffolding strategies.

3.2 Scaffolding Instruction

As students and their teachers participate in co-constructing knowledge through social communication, where teachers provide scaffolding instructions with appropriate aid let to students' progress to be arrive and flowed. Therefore, Dickson, Chard and Simmons (cited in Larkin, 2002, p. 12) defined scaffolding instruction as "the systematic sequencing of prompted content, materials, tasks, and teacher and peer support to optimize learning". Within this approach, the main characteristic of scaffolding can be described in three features: contingent, temporary (Van de Pol & Volman, & Beishuizen, 2011) and intersubjectivity (Verenikina, 2003). The nature of contingent is focused on dual integrated actions: the continuous diagnosis of the students' actual level of understanding, aligned with appropriate intervention. Both are repetitive and related. The teacher administers pre-assessment process to figure out the students' current level of understanding, which is

considered as a diagnostic process. Hence, teachers start intervening at a level that the students can understand the learning strategies to "ensure that the purpose of a task, and the relevant instructions, are correctly understood" (Mariani, 1997, p. 3). Students' responsiveness to dynamic assessment is a good indicator for teachers to evaluate the need of support required by the student. the student might either request additional aid or show mastery of the skill. Based on that, the structure of scaffolding is temporary because the teacher makes gradual withdrawal after ensuring that the student becomes capable to solve the problem independently. In addition to that, Van de and his colleagues (2011, p. 48) described various scaffolding strategies (mediation tools) that take place through the language held between the teacher and the student, such as: "feedback, hints, instructing, explaining, modelling, questioning, and others", in which students not only learn to build healthy social bonds with each other but also become confident and self-directed learner (Mariani, 1997, p. 3). Intersubjectivity refers to the process of how common understanding has been attained within the students, then they internalize the necessary competencies in order to instill them and become able to use them independently in the future (Verenikina, 2003). Formally, teachers can also set the classroom environment in different 'participant structure' to sustain multiple level of aid as necessary. Depending on the learning goals and scaffolding strategies, the teachers can decide to use either collaborative or individualized learning, or deal with the class as a whole (Hammond & Gibbons, 2005, p. 15). In various group options, each group contains different abilities among students who can cooperate and engage in learning independently (Baker & Hansen, & Joiner, 1999), where the students receive a set of consecutive activities to solve a problem together and keep focused. For that reason, Baker and his colleagues (1999, p. 42) underlined the role of complexities in relationship within a group who interact to develop a maturation while solving a problem. Since "people with different perspectives interact. In order to untangle differences in understanding, participants are forced to make their assumptions explicit, to argue, reason about and exemplify them. In order to reach agreement, they need to construct a conception which allows for apparently insightful assumptions from both parties to be integrated, which will often require a conceptualization that is more complex than the individuals' original ones". Similarly, Gillies (2003, pp. 35-36) believes in group work. Since students work in pairs or in different groups' options can develop learning communities and engage in a collective responsibility to learn new content, and together target one goal to find out solutions.

It seems that scaffolding is well developed in different areas in education such as literacy. Clark and Graves (2005) characterized four scaffolding strategies through reciprocal teaching and provided three instructional setting for teaching students to read and understand the comprehension text effectively. While Pentimonti and Justice (2010) described six strategies for scaffolding instruction for loud reading and emphasized on teacher profession to fulfill the relevant support for students who need it. Generally, scaffolding can take place through general guidelines to help teachers instruct the lesson parallel to students' learning level. Larkin (2001, p. 31) mentioned eight elements that teachers can pursue to guide the teaching approach, with no specific arrangement to follow:

1) "Pre-engagement with the learner and curriculum" (Larkin, 2001, p. 31): during this element, the teacher is aware of the weakness and strength for each student in order to select a relevant task that match with the students' ability concerning the curriculum themes. 2) "Establishing a shared goal" (Larkin, 2001, p. 31): setting educational goals promotes students' engagement to follow teachers' instruction in order to achieve progress. 3) "Actively diagnose students' needs and understandings" (Larkin, 2001, p. 31): when teachers are well educated with the educational content and conscious about each students' need then teachers become more able to determine how each student' can improve and proceed. 4) "Provide tailored assistance" (Larkin, 2001, p. 31): teachers can use different forms of assistance to meet the educational demand for each student, such as: "cueing or prompting, questioning, modeling, telling or discussing" Larkin (2001, p. 31). 5) "Maintain pursuit of the goal" (Larkin, 2001, p. 31): a teacher can work in dual direction and ask students more question in order to let them clarify about their understanding. Encouragement and praise are essential to keep the students motivated and focused. 6) "Give feedback" (Larkin, 2001, p. 31): teachers can highlight students' skills and behaviors that contribute to their success, which makes students able to monitor their improvement. 7) "Controlling for frustration and risk" (Larkin, 2001, p. 31): teachers can create an environment free from fear and anxiety, where students are encouraged to try new things and take risks. 8) "Assisting internalization, independence, and generalization to other contexts" (Larkin, 2001, p. 31): by time, the students become able to perform independently and generalize their acquired skills to other contexts.

Accordingly, great responsibility is shouldered by teachers. Staff development is one of the most crucial aspects in expanding students' performance. Students' learning performance is not only related to scores but also includes their competencies, behaviors,

motivation and beliefs toward learning, toward themselves and the other (Guskey, 2002, p. 384). Eun (2008, p. 140) mentioned multiple practical models for staff development that rely on social communication, such as: Training, Mentoring and Study groups. Training is often used alternatively for staff development. It is considered efficient, expensive and adequate of reaching many teachers. It comprises different activities, such as: workshops, presentations, micro-teaching and other. Mentoring means pairing a novice teacher with an expert educator to develop skills. To form a Study group is to engage in doing action research to deal with issues related to the teaching approach. In addition to that, Guskey (2002, p. 385) presented a "model of teacher change", by addressing the role of teachers' attitude in adapting new pedagogical practices at school. He proposed that "neither training alone nor training followed by implementation was sufficient for affective change. These particular attitude and belief changes occurred only when training and implementation were combined with evidence of improved student learning". Indeed, Keijzer and his colleagues (2016) acknowledged the role of teacher cooperation in enhancing the overall development of the school. When a group of teachers participate in a program to develop their own skill, they are likely to transfer their knowledge with other teachers in their own school. Therefore, teachers should be properly trained to realize complete advantage of scaffolding.

Tomlinson and her colleagues (2003) argued for content and direction to meet the educational demand for advanced students. Teachers can adjust the curriculum and the teaching instruction to "adapting pacing, determining an appropriate degree of challenge, and providing supported opportunities to develop interest" (p. 160). Since advanced students often learn faster, feel bored in traditional content, and tend to dig deeper in areas of interest and express themselves in creative ways, teachers can provide a challenging content that correlate with the students' pace of learning through differentiation. This can happen by creating customized differentiated goals that reflect the learning potential for each student, as there is no superior way to differentiate (Tomlinson et al., 2003). To better understand the current level of each student, teachers carry out a pre-assessment for a particular area of content, to figure out what content students have learnt skillfully and what ideas still need follow up. Accordingly, this evaluation helps teachers become more capable to individualize instruction for their students and guide their teaching for the best practice. Scaffolding is believed to be central in the process of learning in order to grant

the students accelerative access, which can be characterized by enrichment of the content on one hand or promoting the students to an upper grade-level on the other hand.

4. Methodology

This chapter attempts to address the relevance for using phenomenography as a methodology within the field of giftedness in Finnish education. As well as clarify on its ontological and epistemological perspectives. Aspect of data collection and analysis will be also explained.

4.1 Phenomenography as a methodology

My previous qualification in gifted education leads me to choose this topic. As my goal is to be a teacher consultant soon, I started administering this study to reveal Finnish educators' understanding about the field of giftedness. Since the Finnish educational system has been blamed for dismissing gifted education from their agenda. Therefore, I chose to do phenomenography to investigate Finnish educators' views about gifted programs, in which use academic acceleration to probe into several arriving points. In order to clarify about their opinions and the variation of ways they *perceived* acceleration and its relationship to the educational setting. For this purpose, phenomenographic framework has been adapted as a research methodology.

Even though, this study discusses giftedness through explaining one common way among others to incorporate academic acceleration and make it a part of inclusive education. But the main interest of this study is not to say that the Finnish basic education system is not taking care of its gifted students. On the contrary, I believe that giftedness is there. Therefore, to discover how educators who coach teachers in order to serve students with their diverse needs. This study oriented to provide an opportunity to allow Finnish educators openly declare about their own voices and thought regarding acceleration. For that reason, phenomenography has the potential to allow these voices and thoughts to emerge.

In Sweden, Ference Marton (1981) introduced phenomenography as a methodology in the early 80s. The ontology and epistemology of this paradigm has been developed and become popular in the 90s. Geographically, spread over to the UK, Australia and Hong Kong (Åkerlind, 2012. p 321). Phenomenographic paradigm was viewed as a helpful approach that conceive more relevant answers to better approach teaching and learning (Marton, 1986). Due to its concern for "mapping the qualitatively different ways in which people

experience, conceptualize, perceive, and understand various aspects of, and phenomena, in the world around them" (Marton, 1986, p.31).

Recently, the field of phenomenography is already linked to the scientific field. But it has been widely debated about considering it as an approved method to analysis data, on the one hand. And as a valid research approach underpins with philosophical and theoretical assumptions, on the other hand. Since it, historically, did not assign itself to a particular approache, methodologies, or ontological assumptions.

4.2 Phenomenography as a choice

The objective of phenomenography is to explore how a group of people manage a situation or problem (Marton & Booth, 1997). Since individuals encounter life situations in different manners. Where vast factors can influence their understandings, for example, past experiences, personal values, friends, emotions, and educational background. For that reason, it seems worthy to scrutinize how Finnish educators (subject) understand acceleration (object) in accordance with their personal and professional backgrounds. Phenomenography is a rich ground for teachers, educators, and policymakers to examine their educational practices and policies at school. Where researchers, educators, and teachers can distinguish between what are the best pedagogy that is necessary to extend the learning experience for the students (Marton & Pang, 2006). Therefore, this study wants to reveal educators' understanding toward a specific pedagogy (acceleration) to meet the educational demand for academically able students (Marton & Pang, 2006, p. 194). The practical analogy of incorporating acceleration within learning is seen as a necessary pedagogy to meet the needs for students who want to excel their learning. Since teachers play a fundamental role in choosing the appropriate pedagogical set to enhance students' success. This study uses acceleration as a good source to explore variances within Finnish educators' understanding toward it, as well as similarities. Since educators coach teachers in order to "act professionally", in which entail them "to distinguish between what must be done and what might be done to achieve one's professional aims and carry out one's professional duty" (Marton & Pang, 2006, p. 194). Marton (1986, p. 33) argued that phenomenography is neither concerned merely about some characteristics of the participants themselves (the subject of the study), nor about the object in itself (academic acceleration), but to the relationship in between. Actually, the attention is directed toward

the relation between a participant and the given phenomena, which enable distinctive characteristics to emerge. As Marton (1986) identified, "we try to characterize how things appear to people" (p. 33). Since, the "content of thinking" is what each phenomenography researcher keep seeking for, instead of mental function (Marton, 1986, p. 32). Educators' reflection constitutes the '*content of thinking*', which make up the content of the analysis in order to produce the outcome results of the study. Parallel to that, Yate's (2012, p. 99) confirmed that the "*content of thinking"* is an alternative process to derive a thorough understanding of how individuals make an account to their *internal relations* with certain phenomenon. Therefore, possible diverse set of conceptions about acceleration might offer an opportunity for all educators who seek for information concerning the phenomena treated here to "uncover conditions that facilitate the transition from one way of thinking to a qualitatively 'better' perception of reality" (Marton, 1986, p. 33). Since transition from one reality to another is not the aim of this research, but what I found helpful is the possibility to provoke one's own critical thinking about educational issues that are taken for granted.

However, the aim is to answer these questions, which are: **What are Finnish teachers' educators conceptions about incorporating academic acceleration within basic education?** and **How Finnish educators serve diverse students' needs?** to explore in commons as well as variations within Finnish educators' conceptions about acceleration, phenomenography seems to be a suitable choice for this purpose.

4.3 Ontological and epistemological premises

In phenomenographic research, the only used method to understand someone else's experience deeply is through second-order perspective (Marton, 1986, p. 33). In which the researcher can deal with the participants' "immediate experience, conceptual thought or physical behaviour" to reveal their understanding through a dialogue toward a particular aspect (Marton, 1986. pp. 41-42). Such implication in educational field, would provide useful information to educators and professionals about different ways to fulfill teaching and learning. This philosophy is then to be distinguished from phenomenology, since the researcher studies the individual's experience from the first-person perspective. Where the researcher makes sense of the experience while living through the subject's (the

participant) experience as s/he is feeling it. Marton (1986) stresses the philosophical difference between phenomenography and phenomenography in the following quote.

"Phenomenographers do not make use of this distinction, at least not as a starting point in research. We try instead to describe relations between the individual and various aspects of the world around them, regardless of whether those relationships are manifested in the forms of immediate experience, conceptual thought, or physical behavior" (pp. 41-42).

As the nature of the phenomenographic information locates a greater emphasis on the relational link between the participants and the phenomena, where the participants (subject) and the phenomenta (object) are not separated, since the phenomena is not independent from the participants. Therefore, constitute the "non-dualistic ontology" of the experience (Richardson, 1999, p. 66). However, there are several ways humans can live a phenomena, while at the same time each experience retain its individuality. In which reflects the premise of intentionality and also establish the variation in the consciousness of experiencing a phenomenon (Yate et al., 2012, p. 98). Thus, Marton explained that "there is only one world, a real existing world that is experienced and understood in different ways by human beings; it is both objective and subjective at the same time" (Richardson, 1999, p. 66). Marton's idea of "non-dualistic" ontology evokes an important point of debate whether other realities exist outside the individual. Richardson (1999, p. 66) proposes a useful contribution to this point. As the world split into subjects (human) and events (objects), where the individuals can't form their conception about an event until they live and access it. Therefore, reality can only be deduced by living the experience. Even though, there are other realities that have not yet been experienced but exist. So "we cannot describe a world that is independent of our descriptions or of us as describers" (Marton & Booth, 1997, p. 113). Accordingly, the selected participants, here, are the ones who have relationship and agency with a certain reality. Therefore, it seems true to adapt this ontology to this study in order to reveal educators' interconnectedness with the phenomenon under investigation.

Two other epistemological assumptions to consider in the phenomenographic methodology: first, to assess transferability, there is no motive to generalize the research results. Since each understanding of a reality is relational and reside in the setting (Svensson, 1997, p. 18). The next concern is that the researcher's attention is not to create his/her own judgment on these experiences as 'good' or 'bad'. Nevertheless, phenomenography is concerned in all the perspectives, encompassing the "mistaken" one

(Marton, 1986, p. 32). The current study is concerned with all the perceptions as fairly valuable.

Since interview is the primary source to gather the data about the participants in phenomenographic method. Beginner researchers might view the interview as a challenge. Since participants' true reflection is reliant on the interviewer's neutrality through the process of interviewing. To access participants' understanding of reality, researchers should be aware of their objectivity. In which reflect the term "bracketing" used by Ornek (2008, p. 3) to describe the process "that the researcher must approach both the interview and the data to be analyzed open-mindedly without any input from his or her perspectives". Similarly, the researcher can bracket his/herself by "holding the social process of interest up for serious examination and confronting it on its own terms to isolate its key, essential features (Richardson, 1999, p. 63). Where the researcher deals with his/her objectivity while interpreting the data in order to draw outcome findings about the phenomenon based on participants' responses. It is an important principle in phenomenography for the researchers being aware of their pre-assumption that guide their research in order to be able to detach their subjectivity. In which they can deal with it throughout the whole research, instead of hiding or ignoring it.

Moreover, the phenomenographic approach propose that these different understandings are rationally connected through a relationship with the phenomenon held in common. In which the relationship will appear in set of categories. These categories can identify a "structural set" of understanding a phenomenon in a collective manner rather than the individual (Akerlind & Bowden, & Green, 2005, pp. 71-72). In which represent another assumption in phenomenography, that the researcher is not only trying to reveal the different ways of understanding a phenomenon, but also try to establish a rational structure to explain a range of different ways of understanding (Akerlind & Bowden, & Green, 2005). The categories reflect the rational structure, which is usually arranged in tables or charts, in order to produce the terminus outcome of the study. As the methodology focuses on the experience as a collective, this entails the researcher to keep his/her attention on the transcript as a whole, since the focus is neither on the participants nor on the phenomenon per se. The idea of intentionality represents each individual consciousness about certain event. While differences held within experiences uncovers a "collective consciousness" in relation to that event (Yate et al., 2012, p. 98). In addition to that, most phenomenographic researches have been criticized for applying a passive act to discourse. Where the

relationship between language and conception of reality is disregarded. On the contrary, Richardson (1999, p. 59) argued that because knowledge in phenomenography is implicit, so it "cannot be readily articulated in discourse". Therefore, this study adapted this assumption, since the essence of meaning can be understood from people's domain of consciousness.

4.4 Data Collection of the empirical data

Teacher education matters, since it can influence teachers' thinking about how to approach learning in certain ways. To satisfy my curiosity toward the Finnish educational experience toward meeting the needs for all the students. Five Finnish educators were requested to participate in the research.

To make sure of the applicability of the interview questions, a preliminary interview was conducted and recorded before the main interviews take place. Since pilot interview can help the researcher to refine and test the prepared questions in order to adjust them. Moreover, it helped the current researcher to experience the process in first-hand, since it provides awareness to encounter the struggle (Akerlind & Bowden, & Green, 2005, p. 80). For me, this process took a lot of time, particularly, to make the interview questions clear enough for the participants. Therefore, some concepts related to gifted education was mainstreamed in order to make them understandable and accepted. Since these concepts which are related to giftedness are not familiar in the Finnish context. Through the discussion I had with the piloting volunteer, I found that there are some words should be avoided, such as: gifted students, twice exceptional and should be substituted with talented students, students with special needs and simultaneously talented. Indeed, the participants were informed about the topic in general, the purpose of the interview, and the duration that it might need, some via email and some face to face discussion, one of the participants was approached indirectly by insider person. Through this process the prepared questions were often adjusted, the final version of the interview questions can be seen in Appendix 1.

All the interviews were conducted in January and February. English language was the medium of communication, except in some parts Finnish language was preferred to facilitate some educators to elaborate using their mother tongue. In this case, Erkki Lassila, my co-supervisor performed the translation (highly appreciated). The research data has

been collected through three interviews and one via email. The participants are five and selected through snowball techniques. Two of the participants ask for double interview, since they are working in the same place. The interview questions were sent to all participants in advance. As the interview is a rich tool in phenomenographic study to gain the content of the analysis, the interview is semi-structured (Akerlind & Bowden, & Green, 2005, p. 83). For that reason, the interviewer who are more knowledgeable in the process of the interview, are more likely to benefit from the unstructured setting. Where the interviewer seeks to build a comfortable relationship with the participants during the interview, in which allow the participants for further response. It seems desirable for the interviewer to form trustworthiness and openness with the interviewees. But it is also important to keep in mind, as (Akerlind & Bowden, & Green, 2005, p. 80) pointed out that "not to raise any idea about the topic (s) that have not previously been introduced by the interviewee". Some of the participants are content with short and limited answers while other participants elaborated beyond my expectation. Luckily, most of the participants are also researchers, in which they realize the importance of deep reflections. Consequently, an open conversation with the participants were reachable, where the speech goes in different angles that covered the main themes.

It seems reasonable to spot educators from Oulu, since I am currently a student in Oulu University. All the participants are Finnish with different age groups, educational background, and gender. They have confirmed their readiness to participate by signing a consent, parallel to that, recognize their right to accept, reject, or drop out from the study. The consent can be viewed in Appendix 2. For confidential reasons, their identification will not be mentioned. Five kinds of famous flowers will be used instead, they are: Lavender, Tulip, Rose, Jasmine, and Sunflower. It is my passion of drawing flowers that leads me to combine flowers' names with this academic work.

All the participants were approached directly except one participant who was approached by an insider person. Ideally, Akerlind and her colleagues (2005) preferred to engage 20-30 participants to fulfill the underlying interest of phenomenographic research. In the current study, the author found that five participants are enough to reach a limited number of qualitatively distinct understanding of the topic under investigation. Since the participants gave deep responses and are diverse enough regarding their working experience, age, educational background and gender. Moreover, this number of

participants was considered helpful, in which allow me to be able to well-manage the data in order to generate the outcome findings.

All the interviews were audio recorded and then transcripted. Each participant received his/her transcript to make sure that their ideas are correctly mentioned and indeed to clarify about the unclear sentences. The current researcher goes through the transcripts many often to build a good understanding of them in terms of the research questions. Therefore, pointless parts can be discarded, each unit of meaning was circled and in order to do the coding, after being sure of the coding these units were cut into piles, during this stage, the analysis process that has taken place in this study is a combination of two methods, a little bit of Marton and Booth (1997) and Sjöström (2002).

4.5 Data analysis

It seems that there is no superior method for carrying out data investigation in phenomenography. Since different researches followed varied procedures (Akerlind, 2005, p. 328). However, different methods are carried out in order to reach one aim, which is to understand how educators perceive acceleration "in relation to which they are acting" (Marton & Booth, 1997, p. 111). Therefore, this study chooses the guideline described originally by Dahlgren and Fallsberg and mentioned in Sjöström (2002, p. 341). This method was selected based on its simplicity and lucidity. In which states seven phases for data investigation while quiet placing an emphasis on reflecting the assumptions of phenomenographic content analysis. Thus, to guarantee more reliability, further interpretation of how the content of the analysis was managed in order to form the outcome results will be discussed as follows.

"Familiarization" is the first phase of the process. Which explicitly reflects a well understanding between the researcher and the data, the persistent in reading the data was taking part until a deep familiarity with the content and the context of the transcript was achieved. At this phase, the researcher could realize and check any mistakes during this stage and observe quotes that are valuable to the phenomena in the study.

The second phase is called "Compilation" (Sjöström, 2002, p. 341) which requires more attention toward the meaning of the answers in relation to the whole transcript in order to derive quotes that are valued to the research question. Here, the researcher keeps the

derived quotes within the context, and do the check constantly to ensure what the participants want to clarify regarding the phenomenon of acceleration. Here, the current researcher started to code the meaning within the answers in relation to the research questions. A challenge may face the researcher while involving in a non-ending process of reading the transcripts, is to stick with the words. In which seems beneficial to pay attention here to "look beyond the particular words chosen by the interviewee toward their underlying intentional attitude toward the phenomena they are describing" (Akerlind & Bowden, & Green, 2005, p. 86).

Together the fourth and fifth phases: 'Condensation' and 'Preliminary Grouping', the former echoes a reduction of the participant's replies, to extract the fundamental parts of the participant's answers in relation to the studied phenomena in order to exclude irrelevant, this entails the researcher constantly to keep in her mind the research questions. After that, the current researcher prints out the quotes in order to be cut and make up a pile, the process was drawn by Reed (2006, p. 7) to form the 'Preliminary Grouping', the researchers pulled out the derived quotes from their real context and start locating and distributing categories on the basis of their similar meaning, as well as, their internal relationship. Since Marton (1986, p. 40) emphasis the role of relational characteristic in understanding the relationship between the participants and the phenomena under investigation. Excerpts contain similar meaning and focus are joined together to form a pile, while some quotes remained single, this form the first draft of the preliminary grouping. The quotes were hung on the wall to provide a complete visual image for the current researcher in order to understand and reorganize the quotes in isolation from the participants. Here, the current author went through the data several times to check that the meaning is representing the participants' experience accurately, since the quotes are pulled out from their real context, thus, the process was challenging. Gradually, the final draft for the preliminary units becomes ready to form the first level of categories, this level equates the 'pool of meaning' in Marton (1986, p. 43), as well as, the main themes of the data. The pool of meaning can be seen in the next chapter under Table 1.

In the fifth phase of 'Preliminary Comparison of the Categories' (Sjöström, 2002, p. 341) the researcher compared and found differences within the list of categories, another layer is produced that create borders among the categories. The comparison of the categories deal with two types of contrastive categories, some categories have opposing quotes to the same phenomena in this study (academic acceleration), and other categories are revealing

a comparable stance between academic acceleration with another phenomena called differentiation. Table (2) in the following chapter illustrates the similarities in conjunction with the differences of the participants' ways of understanding the phenomena of academic acceleration.

In phase number six 'Naming of Category', when the pool of meaning is confirmed, at this point, each category was labeled depending on what does it reflects.

The last level of categories of description has been formed within the phase of 'Contrastive Comparisons of the category' (Sjöström, 2002, p. 341). The "structure of awareness" was used to understand participants' experiences. Awareness can be described in "three overlapping" tiers (Cope, 2004, p. 10). The first tier locates within the "internal horizon" between the different levels of preliminary categories and the different ways of experiencing the phenomena of acceleration in order to be discerned (Marton & Booth, 1997, p. 87). While the next two overlapping tiers locate in a further abstract level, they are: the thematic and the margin tiers (Cope, 2004, p. 10), which reflect the 'outcome space', a terminology applied be Marton (Yates, Partridge, & Bruce, 2012, p. 106). To make this process easier, this phase was split into two moves, the first move will reflect the 'internal horizon' which describe participants' central awareness (their focus) and how it relates to their experience, how it appears to them. In order to distinguish what the parts of the phenomenon are inter- related with the participants' experiences (Marton & Booth, 1997, p. 87). While the next move reflects the 'external horizon' of the experience, in which progress further into the participants' backgrounds to understand the phenomena in terms of two tiers (Cope, 2004, p. 10).

After presenting a clear demonstration of the methodology being used, along with the aim of this study, which is to reveal educators' perception regarding the incorporation of academic acceleration as a pedagogy in the learning process. The following chapter provides a close glance of the findings that had emerged along with the investigation process proceeded through the phases.

5. Analysis and Findings:

This section starts exploring the participants' excerpts that had been grouped to form the pool of meaning. The following table provides a visual demonstration **Pool of Meaning** that include different units of meaning, which reflects the themes. The sum numbers parallel to the units are representing how many excerpts reflect that exact meaning held within the unit.

Table (1): Preliminary Grouping or Pool of Meaning

Pool of Meaning (Preliminary grouping)	total number of excerpts
Purpose of basic education	5
professional duty /cooperative environment	4
professional duty /individualization	2
Acceleration is not desirable/ Differentiation is enough	8
Acceleration is desirable/ differentiation is not enough	2
Negative socio-emotional impact for acceleration on the child	8
No clear basis for the negative socio emotional impact of acceleration	2
School culture limitation (for implementing acceleration successfully)	5
Teacher's eagerness toward incorporating acceleration	3
Acceleration limits learning to formal learning	4
Differentiation widen the idea of learning to informal and formal	2
Tools mediated acceleration hinder the holistic growth (scores)	6
Tools mediated differentiation promote the holistic growth of the child	5
Differentiation provide a sense of relief	1
Acceleration provide a sense of stress	2
Technology	1
Accessible forms of acceleration within differentiation	5

Table (2): Preliminary Comparison and Category Naming:

(Preliminary Groupings) or (Pool of Meaning)	Categories
Basic education	Holistic view for child development in basic education
Professional duty /excellency	
Professional duty/ cooperation	

Acceleration is not desirable/differentiation is enough	Contradiction in Perceptions and Choices
Acceleration is desirable/ differentiation is not sufficient	
Acceleration hinders the socio emotional growth of the child	
Acceleration, no proof to hinder the socio emotional growth	
School culture limitation (for implementing acceleration)	Challenges and motives related to acceleration
Teacher' eagerness toward incorporating acceleration	
Acceleration limits learning to formal learning	Comparable stance between Differentiation vs acceleration
Differentiation widen the idea of learning to informal and formal	
Tools mediated differentiation promote the holistic growth of the child	
Tools mediated acceleration hinder the holistic growth (scores)	
Differentiation provide a sense of relief	
Acceleration provide a sense of stress	
Technology	safe solutions
Accessible forms of acceleration within differentiation	

5.1 First level Categories of Description

In this phase, the pool of meaning pulled out five categories to form the first level of categories of description. To make the process clearer, this section interprets how the pool of meaning has emerged, justification is illustrated by checking selected excerpts within each category, a brief explanation, indeed, is provided as follows to elucidate how the categories were sorted and produced.

'**Holistic view for child development**' is the first category that includes three units from the pool of meaning. These three units are: 1) **'The purpose of basic education'** and 2) **'Professional duty/ cooperation'**, 3) **'Professional duty/ individualization**. The three

units set the tone for fulfilling the teaching approach to meet the aim of basic education, which correspond to the holistic growth of the child. Even though, participants have similar views about the purpose of basic education, which constitute the first unit '**the purpose of basic education**'. While the next two units reflect two different ways regarding teacher's responsibility to meet diverse students' needs, which are: 'Professional duty/ cooperation', and 'Professional duty/ individualization'. The following excerpts exemplify the common agreement in unit (1) while demonstrating the different views held among the participants in unit (2) + (3) on the basis of their divergent focus.

Unit of meaning (1): The purpose of basic education. I discuss here only two excerpts to show the harmony held among the participants' views regarding basic education, even though all of them are similar with little variations.

> "I think the purpose of basic education is to <u>let the child to grow in a safe environment</u> as a human being and to think about <u>the well-being of the child</u>, and think a lot about the <u>ethical, moral growth of the child</u>. <u>Then the basic skills</u> and knowledge that you need to achieve. I would say basics in languages, reading, writing and mathematics. And when talking about the healthy environment and well-being, then <u>we need a lot of art, craft and physical education </u>and things that people do in life."   Tulip

> ''I think it has two purpose, giving the society kind of individuals and mass of <u>people that it needs to support and renew itself</u>. On the one hand, education is a more continuum or <u>lifelong learning sense</u> then give its <u>people the tools that they need to be humans</u> in this time and age.''   *Lavender*

Unit of meaning (2): 'Professional duty/ cooperation'. Participants aligned teachers' responsibility through placing a greater emphasis on social interaction to meet diverse students' needs.

> "I think it goes this way, as <u>a teacher you have to recognize the different needs and skills and competences of the kids</u>. Then, you have to know the classroom <u>environment as a social phenomenon</u>, so you can notice <u>the power structure</u> in the class and then you have to be <u>very wise</u> so that you would support everybody's learning."   *Tulip*

Unit of meaning (3): 'Professional duty/ individualization', the focus in this unit is clearly different from the previous unit, in which constitute a new unit that contrast the previous one in the basis of its focus, a great emphasis on teachers' responsibility to individualize.

> ''<u>Teachers can pace their teaching</u>, do their planning that takes into account certain students' need to <u>proceed faster</u> or they want to have the students stay behind in their pace, so they can <u>give individual assignment</u> or do other kind of <u>acceleration</u>.'' *Lavender*

'**<u>Contradiction in Perceptions and Choices</u>'** is the second category that identified contrasting opinions in regard to the phenomena in the study, and it involves four units of meanings in the following order: 1) **differentiation is enough**, 2) **differentiation is not enough**, 3) **acceleration causes negative social emotional impact**, 4) **no clear basis for the negative social emotional impact**. The first two units (1) + (2) give an explicit contrast from the title, even though, some excerpts have an implicit meaning for that contrast. They show the contrast in cognition of the pedagogic-choices held by the participants, and the answers reflect what educators believes is appropriate to choose as a relevant pedagogy. While the next two units (3) + (4) uncover the causes behind participants' pedagogic choices with regard to the impact of acceleration in a general sense. Unit (3) reflect participants' fears of incorporating acceleration. Whereas unit (4) reflects that teachers' fears about acceleration is a misconception. To exemplify the contrast of choices between unit (1) and unit (2), and the different conceptions held by the participants between unit (3) and (4), excerpts be follows.

Unit of meaning (1): Differentiation is enough.

> "I would like ask <u>more focus on differentiation</u>, and <u>acceleration is an exception</u>" *Rose*

Unit of meaning (2): Acceleration is desirable, differentiation is not enough. (In implicit way)

> "We have this kind of idea that you have to and can do differentiation, <u>but when you go to the actual classroom, the context might be quite different</u>." *Lavender*

Unit of meaning (3): acceleration causes negative socio emotional impact.

> "Academic acceleration <u>promotes the idea of competition</u>, which somehow <u>strengthen certain power structure in the classroom</u>, it somehow keeps power for those <u>who are doing well in their tests and</u> take power away from those ones who are not doing well in the competition."   *Tulip*

Unit of meaning (4): no clear basis for the negative socio emotional impact of acceleration.

> "I heard some teachers think quite a lot about the students who if they acknowledge giftedness and do this kind of things, the other students might feel that they are, okay, so I'm not talented, I'm just a usual student who can't perform that well<u>. They think about that kind of emotional impact that acceleration might have,</u> but usually, I don't think there's much research basis to support that." Lavender

The third category is '**<u>Challenges and motive to incorporate acceleration</u>'**, which encompassing three units of meaning, they are: This category provides justification against the current status of the Finnish schools that are not dealing with acceleration in an open way. The overall tone set in this category is the need for change to incorporate acceleration. Which can be split in two main units of meaning: 1) **'School Culture Limitation'**, and 2) **'Teachers' eagerness toward change'.** The contrasting views between the two units are not clearly visible from their titles, but the relationship within each unit allow the constitution of the difference between them to emerge. The first unit can be distinguished from the next unit, since it reflects obstacles that hinder the successful incorporation of acceleration. The participants use school culture, as well as, teachers' profession and attitudes; to describe their relationship with acceleration in which create the first unit of meaning. While the next unit reflects participants' motive to change the existing constrains, but also establish a connection within teacher education to make this change attainable.

Unit of meaning (1): 'School Culture Limitation', the constrains were addressed by teachers' lack of pedagogical skills, as well as, their negative attitude toward acceleration. The first following excerpt address former constrain. While the next excerpt represents the latter one.

"I think it may influence both the individual who is accelerated and the other ones who are not. It depends on how the teacher presents it in the class. <u>If he or she makes a big issue out of it then it might be a problem.</u> But I think if you <u>are really skillful in pedagogy and communication, you can do it without making it a big problem or saying that it's something out of the ordinary.</u> When a student goes to join other students in different classrooms to study because it best fits his or her educational needs. <u>If that is the culture of the classroom where everyone gets individualized to a certain degree, then the actual things that you do don't matter that much</u>."   Lavender

 "it is something that <u>teachers should be able to deal with if some problems arise,</u> so <u>they shouldn't just preemptively decide,</u> okay, <u>we don't do acceleration because something might happen.</u> In a general sense, I have as a <u>teacher is that you try things</u>, you do things not just to be safe all the time but if some problems arise, <u>you need to find ways to deal with them</u>. It's just how life is. <u>It is kind of attitude you want to give it to your students</u>."   Lavender

Unit of meaning (3): 'Teachers' eagerness to make a change', the first excerpt addresses the motives for change, while the next excerpt strongly reveals a connection with teacher education.

 "Recently, I've been thinking about what is being done here in Finland, what are the attitudes of Finnish people towards gifted education. At the same time because I have a background in doing research in (…….) and knowing something about that culture, it's also interest me quite a lot perhaps to compare because there are similarities between the (……..) system and the Finnish system and the way that society structures to be quite egalitarian, <u>how can you find openings to do gifted education, raise awareness and skills of the teachers to address those needs. It's something that has been on my mind quite a lot recently</u>."   Lavender

"I think <u>the big thing for teacher education would be to at least raise awareness</u> that students might have learning disabilities and great talent at the same time or at least capacity to develop their talent and then let them know that if they have one."   Lavender

'**Comparable stance between differentiation and acceleration**' is the biggest category that encompasses a comparison between differentiation and acceleration (the phenomena in the study), this category is distinguished from the second category for this reason. The excerpts also reflect deeply on why teachers believe that differentiation is better for the holistic development of the child. participants provide concrete examples that contemplate the impact of acceleration on learning and on the students. Their justifications are checked against acceleration, since acceleration is viewed as a quantity way of learning while differentiation is seen as a quality way of learning. Participants use the terms: **bullying, stress, exclusion, free time, and narrow way of learning**; to describe their internal relation with acceleration. The answers highlight the adverse impact of acceleration on the child growth based on two views: testing and moving the child from his/her group age. So, this diagnosis refers to the inadequacy of acceleration as a practice. Since the overall diagnosis uncovered a broad array of dimensions, the following three main units can reflect and discern the educational and socio-emotional impact of the diagnosis. Which are: 1) **Acceleration limits learning to formal setting**, 3) **Tools mediated acceleration hinder child growth,** 6) **Acceleration provides a sense of stress.** As the participants scrutinized acceleration, their inter-relation with differentiation had become visible, in which view differentiation as an appropriate pedagogy to serve all the students by considering differentiation in three units, which are: 2) **Differentiation widen the idea of learning**, 4) **Tools mediated differentiation promote child growth**, 5) **Differentiation provides a sense of belief**. Their answers allow the author to make direct comparison between the six units of meaning, thus, these units contrast and compared the impact of both pedagogies on the basis of three core meaning: unit (1)+(2) reflect educational diagnosis, unit (3)+(4) reflect socio-emotional diagnosis, and units (5)+(6) reflect the role of free time available for the child. The following excerpts exemplify the comparison.

Unit of meaning (1): Acceleration limits learning to formal learning/ educational diagnosis.

"Acceleration influencing the way we see learning, if we only see learning as something that can be tested at school, it is very narrow idea of learning. I always say what you test is what you get." *Tulip*

Unit of meaning (2): Differentiation widen the idea of learning to formal and informal.

"I think that learning is not only at school, it happens everywhere, especially if the teacher just helps the child to be motivated, then the child learns a lot at home." *Tulip*

Unit of meaning (3): The mediated tools in acceleration hinder the child development. This reflect socio-emotional diagnosis.

"Academic acceleration promotes the idea of competition, which somehow strengthen certain power structure in the classroom, it somehow keeps power for those who are doing well in their tests and take power away from those who are not doing well in the competition." *Tulip*

Unit of meaning (4): Tools mediated differentiation promote child growth.

"Social learning takes place in a child's daily life and learning together is a very important aspect of school education. Together, the learners can share things with each other, the perspectives expand, and they get peer feedback from each other. Together, the students practice the skills of conversation, listening to each other and taking into account the opinions and justifying one's own opinion. Through learning together, the child practices and learns the essential skills needed in life." *Jasmine*

Unit of meaning (5): Differentiation provides a sense of belief, since free time is available for students to pursue their hobbies.

"If I go back to think about my age group, many of my friends work with the Ministry, some in the World Bank, some are working in these high positions in Nokia, they are just doing very well. You know, I think it was also that we were given the basic skills, but we were given a lot of freedom. Some of us were playing in the bands and other were….. And I was also leading girls' club, on Mondays, for the girl age (10-12), then I was giving horse riding lessons. So, there is a lot of

responsibilities, anyway, that you carry on even when you are not at school."
Tulip

Unit of meaning (6): Acceleration provides a sense of stress.

> "I think <u>if I had been pushed and pushed all the time when I was in school</u>, I might have had <u>a negative attitude towards learning</u>." *Tulip*

The next and last category is **‘Safe solution’** that including two units of meanings (1) +(2). Which are: 1) **‘Accessible forms of acceleration within differentiation’**, and 2) **‘Technology’**. According to the participants, the displayed tone set by this category deals with different forms of acceleration that contribute to positive socio-emotional impact on the students. Therefore, the first unit show accelerative forms that are already exist in Finland, while the next unit proposed a suggestion for further implementation in the future toward acceleration without socio-emotional harm.

Unit of meaning (1): ‘Accessible forms of acceleration within differentiation’. This form echoes extracurricular form of acceleration, which equate enrichment.

> ‘Talented students are able to nurture their talents after school classes, schools’ clubs and summer schools for mathematics, science and gymnastics.’ *Rose*

Unit of meaning (2): ‘Technology’.

> "I think in Australia, for example, they are already having computer programs that you can have a test, for example, algebra… <u>where you can see your level and then it gives you tasks from eight different levels.</u> If you fail many tasks, then you move back, but if you get them completed, they can raise you up. <u>I think this what we could develop in Finland</u>." *Tulip*

The final phase took the categories into further abstract move, the first move leads to produce a structural relationship that form the second level categories of description, by doing a contrastive process between the categories with regard to their related focal point. this move is described in table (3).

Table (3): Contrastive Comparisons of the Categories

Preliminary Groupings or Pool of Meaning	First level categories of description	Second level categories of descriptions (first move)
Basic education	Holistic view for child development in basic education	Qualitative differences among teachers regarding their role
Professional duty /excellency		
Professional duty/ cooperation		
Acceleration is not desirable/differentiation is enough	Contradiction in Perceptions and Choices	
Acceleration is desirable/ differentiation is not sufficient		
Acceleration hinders the socio emotional growth of the child		
Acceleration, no proof to hinder the socio emotional growth		
Institutional realities limit the successful implementation of acceleration	Challenges and motives related to acceleration	Acceleration is adequate pedagogy
Teacher' eagerness toward incorporating acceleration		
Acceleration limits learning to formal learning	Comparable stance between differentiation vs acceleration	Enrichment vs Acceleration
Differentiation widen the idea of learning to informal and formal		
Tools mediated differentiation promote the holistic growth of the child		
Tools mediated acceleration hinder the holistic growth (scores)		
Differentiation provide a sense of relief		
Acceleration provide a sense of stress		
Technology	safe solution to implement acceleration	
Accessible forms of acceleration within differentiation		

5.2 Second level Categories of Description

The description of **'Qualitative differences among teachers' regarding their roles'** encompassing the categories of: **'Holistic view for child development in basic education'** and **'Contradiction in Perceptions and Choices'.** Even though these categories hold in common, contrasted and compared conceptions of what the participants really believe about teachers' role to fulfill their occupation. But they reflect one central point, <u>teachers' role and conceptions within basic education</u>. Since how participants perceive their role as a teacher will influence their practice and decision about how to teach. Gradually, teachers form a conception toward how to do teaching in the best way possible, based on their experience. For that reason, teachers' differences regarding their role in choosing what do they believe is the best pedagogy to serve diverse students' needs within basic education is expected, where contradiction among their conceptions are also existed.

The second description is **'Acceleration is adequate pedagogy'** which reflect a single category **'Challenges and motives to change'**. This category already has a focal point from the previous level. It includes comparing categories that describe the barriers to incorporate acceleration associated with great motive to make a change with a tendency to start this change from teacher's education. The conception in this category reflecting a positive response toward acceleration. Thus, appears to represent the least number among the categories.

The third description which represent a wide-ranging category called **'Enrichment vs Acceleration'**. This category contains **'Comparable stance between differentiation vs acceleration'** and **'safe solution to implement acceleration'**. Both categories reflect positive tendency toward enrichment. Which constitute its focal point of awareness. The participants show how they are inter- related with the different parts of acceleration by using a diagnosis, which turn to highlight the positive impact of enrichment, as well as, the adverse impact of acceleration based on their experience. Participants provide answers of what types of acceleration are affordable and suggested further solution for implementing acceleration in the near future. All the answers are referred to participants' focal point of awareness. To consider enrichment a separate part from acceleration, this category has a

negative impression toward acceleration, while enrichment is welcomed. Since it avoids the socio-emotional harm on the child. The conception of the participants in this category contradicts the previous one.

The final move is the outcome space, which represents two overlapping tiers to identify the whole structure. To make it clearer, the external horizon contains two tiers: the thematic and the margin tiers. The thematic tier reflects the parts that are "considered to be related to the phenomenon". While the "non-related aspect of the world make up the margin of awareness" (Cope, 2004, p. 11). Therefore, what the participants have in their background experience interact with the first tier of awareness (move 1). In which constitute the inter-relation between the focal point (the meaning) and external horizons (the structure), which are "dialectically intertwined and occur simultaneously when we experience something" (Marton & Booth, 1997, p. 87).
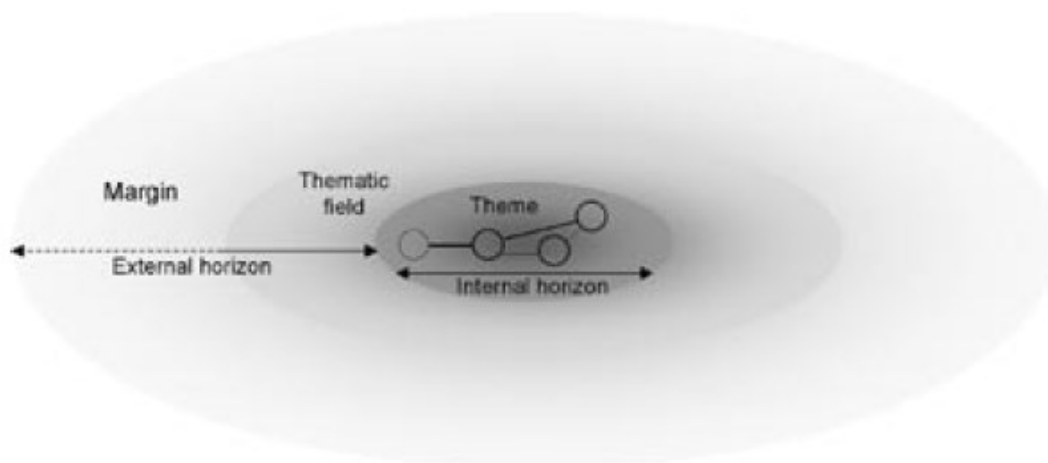

Figure (2): Structure of awareness (Cope, 2004, p. 11).

5.3 The outcome space:

Three conceptions have emerged from the data, which have contrasting views, which are: enrichment vs acceleration, acceleration is adequate pedagogy, and qualitative differences regarding teachers' role. The structure of awareness for each conception allows better view of understanding to arrive, since the internal relation from the earlier levels is also intertwined with the background horizon of the participants. It seems better to describe the internal and external horizon in a visual demonstration, showed in figure (3) as follow.
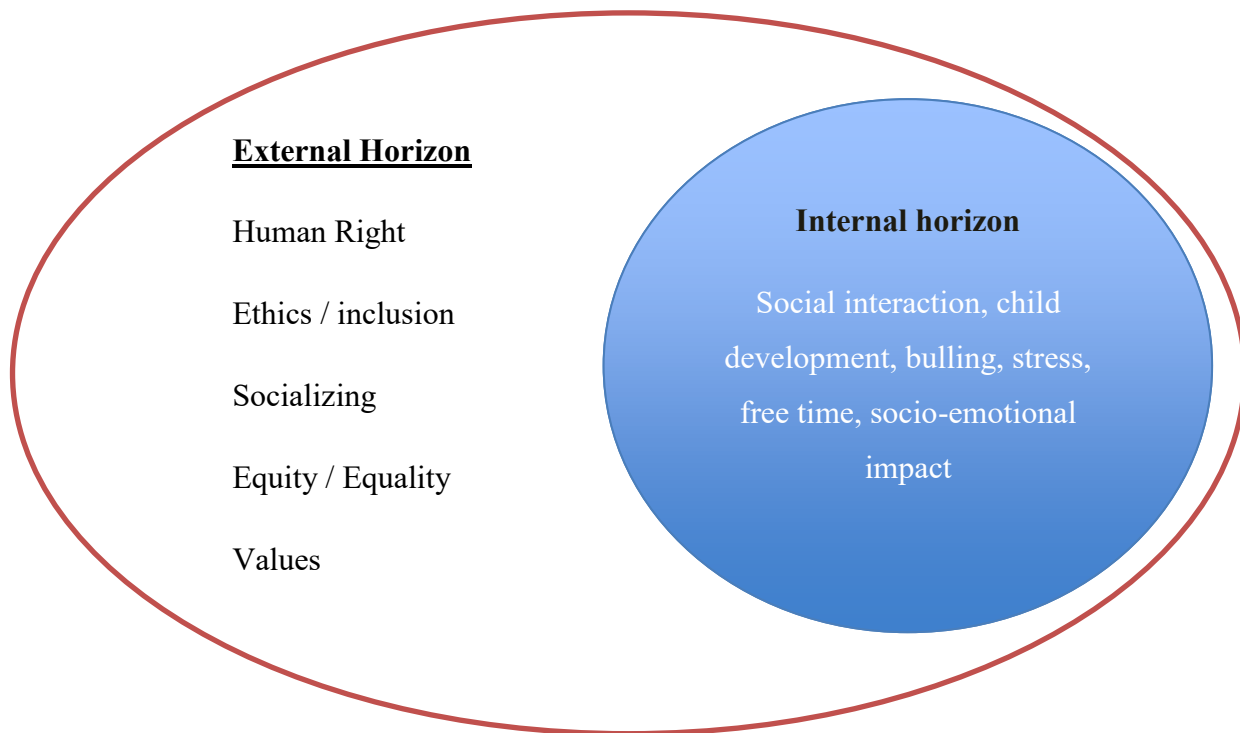
External Horizon

Human Right

Ethics / inclusion

Socializing

Equity / Equality

Values

Internal horizon

Social interaction, child development, bulling, stress, free time, socio-emotional impact

Figure (3): Internal and external horizon/ Conception of enrichment vs acceleration
(Cope, 2004, p. 11; Marton & Booth, 1997, p. 87).

As displayed above, the external relationship determines reasons behind why participants locate certain parts related to acceleration within the focal point of their awareness. In which turn to make meaning of their experience, to understand why they choose this way of serving diverse students' needs. Here, this conception addressed social competence and cooperation in their focal point when dealing with acceleration. Therefore, establish a connection with their background horizon that located outside the participants' focus but intertwined with it to deduce a decision. The background horizon of this conception includes features such as: Values, Human Right, Equity, Inclusion, and Ethics. Accordingly, teachers' responsibility, attitude, pedagogic–choice, and profession are aligned with the external horizon. The following excerpt highlights the external horizon for this conception and deal with it as a priority.

> "I think the purpose of basic education is to let the child to grow in <u>a safe environment</u> as a human being and to think about the well-being of the child, and think a lot about the **ethical, moral growth of the child. Then the basic skills and knowledge** that you need to achieve."   *Tulip*
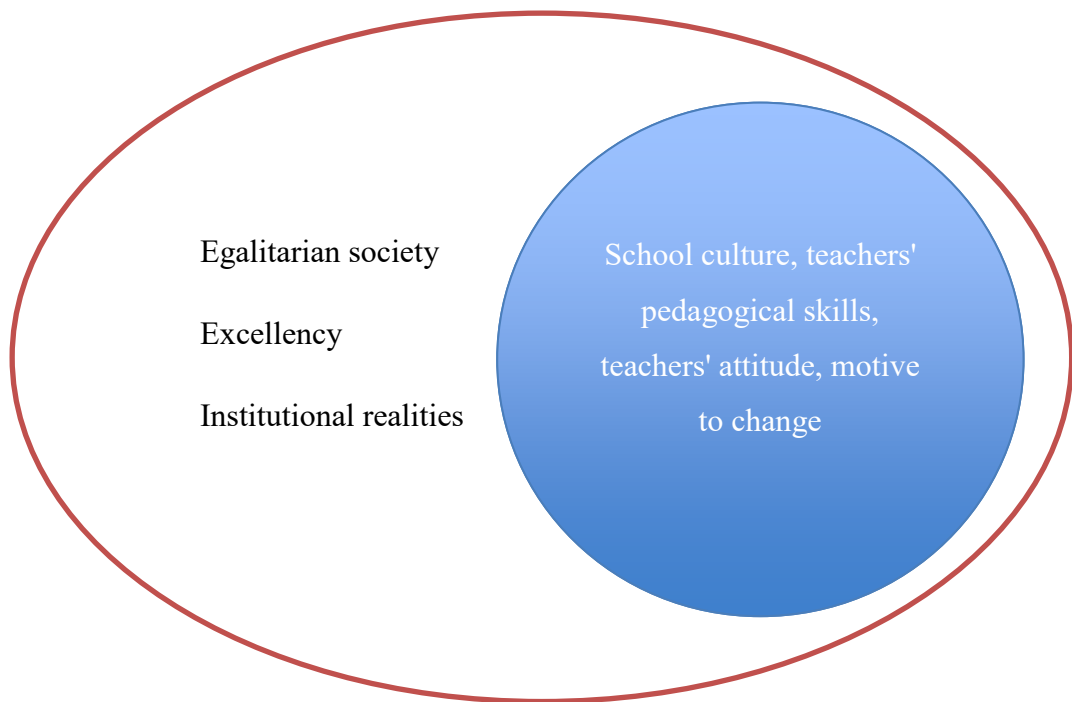
Figure (4): Internal and external horizon/ Conception of acceleration incorporation
(Cope, 2004, p. 11; Marton & Booth, 1997, p. 87)

As it shown in figure (4), this conception took another direction by delimiting acceleration as a part of teachers' responsibility, especially in term of individualization. The external horizon determines that acceleration is a relevant pedagogy to serve divers students' needs. While the existing reality is different, therefore, the variation between what the participant believe is a relevant way and what is recently carried out at school, drive the participants' motive toward a desire to make a change. Consequently, features such as **Egalitarian Society**, **Excellency, and Institutional Realities** are located in the external horizon but intertwined with the internal domain to give meaning to the experience.

Different from the previous conception in term of the internal and external relationship. Within the internal horizon, the participants focus on the obstacles that prevent students' superiority to excel at school, in terms of: **School culture, Teachers' pedagogical skills, Teachers' attitude, and Motives to Change**.

The following excerpts give an indication about the external horizon.

> 'Recently, I've been thinking about what is being done here in Finland, what are the attitudes of Finnish people towards gifted education. At the same time because I have background in doing research in (……) and knowing something about that

culture. It's also interest me quite a lot. Perhaps to compare and see the similarities between the (......) system and the Finnish system and the way that the society structures are quite egalitarian. How can you find openings to do gifted education, <u>raise awareness and skills of the teachers to address those needs. It's something that has been on my mind quite a lot recently</u>.'   *lavender*

Concerning the third conception, **qualitative differences among teachers' responsibility**. This conception is related to the previous two conceptions. Therefore, differences among teachers appeared regarding their role, since teachers' role is aligned with participants' backgrounds. Unsurprisingly, it seems obvious to understand why teachers' role vary between the two conceptions even the purpose of basic education is mostly similar among them. Teachers' role in the first conception is to maintain safe environment for the child regarding the principle of inclusion and ethics. While the second conception focus on the teachers' lack of skills to meet the educational demand for academically able students. This conception will be discussed with concrete examples in the following chapter discussion the findings.

With regard to what is margined in each conception, it seems true to say what is thematic in the first conception (enrichment vs acceleration) is margined in the second conception (acceleration incorporation), and what is thematic in second conception (acceleration incorporation) is margined in the first conception.

All conceptions and realities are keenly linked to serve diverse students' needs, including the academically able students. In which constituted the outcome space for this study in table (4).

Table (4) presents the outcome space.

Preliminary Groupings or Pool of Meaning	First level categories of description	Second level categories of descriptions (first move)	The outcome space
Basic education	Holistic view for child development in basic education	Qualitative differences among teachers regarding their role	Conceptions and realities to serve diverse students' needs in Finland
professional duty/excellency			
professional duty /school environment			
Acceleration is not desirable /differentiation is enough	Contradicting views regarding acceleration		
Acceleration is desirable/ differentiation is not sufficient			
Acceleration hinders the socio emotional growth of the child			
Acceleration, no proof to hinder the socio emotional growth			
School culture limits the successful implementation of acceleration	Challenges and Motives to Change	Acceleration is adequate pedagogy	
Teacher' eagerness toward incorporating acceleration			
Acceleration limits learning to formal learning	Comparable stance between Differentiation vs Acceleration	Enrichment vs Acceleration	
Differentiation widen the idea of learning to informal and formal			
Tools mediated acceleration hinder the holistic growth			
Tools mediated differentiation promote the holistic growth of the child			
Differentiation provide a sense of relief			
Acceleration provide a sense of stress			
Accessible forms of acceleration within differentiation	Safe solution for implementing acceleration		
Technology			

6. Discussion of The Findings

The main findings will be reviewed by answering the research questions and referring to the objective of this research and to the different components of the theoretical chapter and literature review. The two research questions are: 1) **What are teachers' educators' conceptions about incorporating academic acceleration within basic education?** and **2) How divers students' needs are served in Finland?** This section will not only commit to contain the main points from the previous chapter but also provide a comprehensive understanding for the whole picture, in order to reach a better understanding for the findings of this research. Teachers' educators conceptions are essential since they are the first line to coach and interact with teachers, to address their ideas means to touch what they are making sense of with regard to the phenomena, and what they recognized and perceived as desirable and relevant to be done or the other way around.

To cover the first research question, which is: "What are teachers' educators' conceptions about incorporating academic acceleration within basic schools?" When the participants were asked about acceleration, two main conceptions were emerged. This section will deal with the third conception **'Qualitative differences among teachers regarding their role'** within the main conceptions, since teachers' role is varied and aligned directly to the two different realities. The two conceptions will be addressed regarding the first research questions.

6.1 Educators' concern about acceleration.

Enrichment vs acceleration: Most educators show general objection toward acceleration. When the discussion started about acceleration, facial expressions were recognized on some faces as surprised when this topic took place. Then I realized the reason behind their reaction, when the findings of this study have emerged. Their facial expression is a part of their reality toward acceleration. The findings which declared that acceleration is recognized by the majority as negative phenomenon, most of the participants seem not interested in the pedagogy of acceleration. They perceived acceleration as a strategy that causes harm to child development. Many excerpts reflect the adverse effect on the learning process and on the holistic growth of the child. All the criticism against acceleration are referring to two practices: setting high standard to grant the students accelerative entry, which requires a lot of assessment to take place in order to identify the students' eligibility

for acceleration, on the one hand. The next practice that requires to lift the child up to join upper grade-level, on the other hand. Even though, both practices are done to pursue students' academic competences, but academic matters are one piece of child development. Therefore, both practices are questionably rejected. Educators scrutinized the impact of the phenomenon of acceleration and provided general diagnosis for why they perceive such recognition toward acceleration.

Educators' realities about acceleration are negative. Acceleration was seen to exist as a component part of negative impact from multiple dimensions, therefore, to position acceleration within the school resulted in more negative effect than positive one. Educators focus on several elements regarding acceleration, which are related to each other and produce their realities.

Educators offer their answers into two tangible dimensions: educators use bullying, exclusion, narrow idea of learning, students' resistance, no free time available, and stress to describe their relationship with acceleration. Simultaneously, they drew attention toward the adverse socio-emotional and educational impact. The educators within this conception vouched for the negative social, emotional, and educational consequences. One of the educators underscored the role of ethics, but all of them place a great importance on the socio-emotional impact. Therefore, the reality emerged by the educators put much emphasis on social, emotional, ethical, and educational aspects as a prior purpose in basic education.

Description about competition for setting high standard where every student must indulge in, in order to prove superiority. As competition is used to motivate students in order to beat boredom and thrive. Nevertheless, it seems that a lot of competition with high standard allow downfalls to arrive. One of the educators was exceptionally clear about this point, the hidden influence of testing was repeatedly spotted and branded as provoking unnecessary competition within the school. Consequently, bullying, exclusion, narrow idea of learning, anxiety, etc.; become integrated components in the school environment.

> *"It can promote negative power structure in the class, now I am talking about phenomenon like bullying. Let me tell you how it works, when someone feels* unhappy *in the group and think to get more power and then you find someone who is weaker than you, in that sense and you start bully that person, then you try to get some people with you because it somehow gives you power to exclude*

somebody. Then the other ones <u>are afraid that if they don't bully that child they</u> <u>are going to be bullied, too.</u>" Tulip

Other description raised the matter of rushing the learning time if more pressure is added on the child to gain academic skills. Teachers use extra students' time to make sure they have mastered the needed skills in order to be granted an accelerative entry. Educators viewed this process as trigger stress and anxiety to the students, as well as, force the students to compete in a racetrack and pushed to reach the last stop.

"I think if I had been pushed *and pushed all the time when I was in school, I might have had negative attitude towards learning."*

This reality was a surprising one, since the aim of granting the student an accelerative entry is to solve the problem of boredom and disengagement. Since, lack of challenge at school can create students' negative attitude toward the school.

Moreover, the role of teachers within the school was also highlighted by the same educator. Where teachers should be aware of the hidden impact of testing and competition, particularly, when it used for ranking purposes or selecting students for accelerative entry. As the practice of acceleration involves testing and grade-skipping, two educators explained another hidden consequence related to the high conceptual 'macro level'. To guarantee learning in this manner, teachers align learning to students' scores, as well as, to specific upper grade-level; which means to impose parents and students to embrace a narrow learning-perspective. The high conceptual level of educators' thinking is explicitly visible in the first excerpt, while the next one illustrates on teachers' being aware of the negative impact of testing and competition in the school setting. The idea of graded and non-graded environment was mentioned in section (2.6), in which dynamic assessment considered fruitful to get rid of the side effect of traditional testing.

"So every time I make *a test, I'm focusing on the kid's idea of learning and then this academic acceleration can easily change the parents' and students' idea of learning only towards the academic certain questions that I asked at school."* Tulip

"I think it goes this way, as a teacher you have to recognize the different needs and skills and competences of the kids. Then, you have to know the classroom environment *as a social phenomenon, so you can notice the power structure in the*

class and then you have to be very wise so that you would support everybody's learning." Tulip

The description of comparison was also addressed by one participant. When competition and scores become part of the school system, students start comparing themselves with other. Which turn to force every student to focus on his/ her personal gain, where students excel their learning by pursuing their efforts to beat their peers in order to grant a reward or accelerative entry. Therefore, lack of empathy among students become a consequence. Instead of promoting mutual gain for all the students by promoting collaboration. This description can be understood in association with the previous descriptions, not only from the following excerpt.

> *"When I was still a kid we had a habit that* the *teacher was giving the grade in front of the class, and would call the name and say the grade. So that all the other kids would know your grade."*   Tulip

When educators were asked about their opinion about acceleration, some of them seems to equate it with one form, which is grade skipping. Since educators start addressing their worries about students' displacement and provide wide range of diagnosis regarding this form, they implicitly represent acceleration as a quantity way of learning (the last line in the following excerpt echoes this idea of quantity learning). The idea of teachers' misconception regarding equating acceleration with one form (skipping grade) is common in acceleration. Section (2.6) mentioned this idea. However, educators' reality is an indicator of why educators prefer enrichment, since the student can stay with their age group within enrichment. It is essential to mention that none of the educators used 'enrichment' explicitly, but they refer to it by using the term differentiation. The connection of educators' description with enrichment was obvious.

> *" I think I can do differentiation in the classroom. The skilled kid will feel proud and* learn *more. I try to offer extra materials and extra ideas, like if we are learning human body at school, so we have to know minimum the bones (say grade eight). So if I have a skillful kid I will bring science magazines about human body, and then the child might learn from them. And s/he can explain to other kids how the ankle* is *working and what all kind of different things you need for that, and extend to the blood circulation and so on. So that I try to widen the idea of learning*

by providing extra material or extra idea…, Instead of thinking about now you are in the level of grade eight or grade four." Tulip

Consequently, educators perceived acceleration as weaken the commitment toward equality and equity on the basis of its practice. In addition to that, acceleration weaken the students' social structure by strengthen competitive values, which turn to diminish the purpose of learning. All the above-mentioned realities are aligned with the aim of Finnish basic education, where evaluation is not done to trigger stress or ranking students. This study elaborated about these principles in section (2.1). It seems important to notice that there has been a lot of research considering the above-mentioned realities in gifted programs. Renzulli (2005) described the use of relative scales instead of testing in primary schools and use a defensive action plan for granting the students accelerative entry regardless their backgrounds. Moreover, substituting traditional assessment with the idea of *planning backwards* proposed by McDonald (1992), in which aim to evaluate each students' progress to close the gap between what is already known and what s/he should accomplish. These issues were discussed between the lines in this study.

After understanding most educators' realities about acceleration. Far from this reality, a contrast reality that hopes to incorporate acceleration is held. Honestly, the division between the two conceptions was unexpected, since the association of all the participants' description concerning the purpose of basic education are consistent. All the answers together- without exception- with so much focus on the holistic growth of the child as a central core for basic education, and indeed shed the light on a broad dimensions as valuable elements to achieve a successful learning environment for all the students in primary schools. The following two excerpts illustrate on the consistency within participants' views regarding basic education.

> "I think the purpose of basic education is to let the child to grow in a safe environment as a human being and to think about the well-being of the child, and think a lot about the ethical, moral growth of the child. Then the basic skills and knowledge that you need to achieve. I would say basics in languages, reading, writing and mathematics. And when talking about the healthy environment and well-being, then we need a lot of art, craft and physical education and things that people do in life." *(Tulip)*

"That's really huge question. I think for me it has two purposes: giving the society the kind of individuals and mass of people that it needs to support itself, to renew itself. On the other hand, I like to think education is a more continuum or a lifelong learning sense, it gives the *people* the tools that they need to be humans in this time and age, to support and renew itself. It has more universal meaning, not just like instrumental to get skills and knowledge to do stuff, but to learn about what is to be a human." *(Lavender)*

However, educators within this conception start addressing the existing barriers to incorporate acceleration and what should be done to facilitate that. This conception repeatedly marked the challenges that are related to teachers' resistance, school culture, and teachers' lack of pedagogical skills in order to integrate acceleration. It seems that Finland's schools disregard gifted programs involvement. In which turn to drive the educator's motivation seeking for opening rooms to integrate acceleration within the educational system. Since, some students have outstanding ability for excellence in subject matters, where schools should meet their educational demand. The less their demands are acknowledged within the curriculum, the more boredom and disengagement become the norm of the school. The existing school's culture was seen as denying students' outstanding academic competences.

"You can have micro achievements, let's say you're learning cooking, for example, the knife *using skills would be one area, if you can show that you can do slicing, if you already know that, you don't have to do all the things you can proceed forward. Obviously, <u>you need to do adjustment to accommodate the fact that some students already know quite a lot. So what do you do with students who already know quite a lot, okay, so what do you do with them at this point? That's usually the difficulty that the teachers don't want to do the thinking of</u>....."* Lavender

There seem many studies in Finland echoed this reality and argued frankly for adopting gifted education or even special school to serve advanced student. For example, Tirri and Kuusisto (2013), and Laine (2016), who seems to disagree with the existing policies in the education system. According to the two contrasting conceptions, I would suggest that these two conceptions can take place in teacher education, in order to broaden the discussion from within and find a balance between them.

Though Finland's education showed a significant result for students' writing, reading, and mathematics at global standard. But still, the equilibrium between maintaining equity and equality principles at schools, on the one hand. And fulfilling the need for academically able students on the other hand, is uneven. Since the educator highlighted the need for further requirement, such as school adapting policies for acceleration to guarantee a successful implementation. Therefore, the Finnish school culture become seen to exist as a component part to allow the students to reach their max potentials.

> "*Teachers have general understanding about differentiation. In many cases, planning your teaching in a way that one or two students require special kind of attention, each lesson, if it becomes a routine, I don't think it's a problem. But if you have to start fresh from each session, it's really time consuming and because the class sizes are what they are, you don't necessarily have the time to do the individualization to a point where you would want to do it in each classroom. It's also a matter of having enough resources to do that, having someone help you with the classroom or do that of flexible and having enough materials, even might be just having a textbook for those who have learning disabilities, you need to have access to all kinds of things.*" Lavender

The idea of adapting accelerative school policy to promote the successful incorporation of acceleration was mentioned in section (2.6).

Description of teachers' compliance toward the current situation in Finland as perceived by the educator. Teachers themselves are part of the current educational construction. Because teachers are only focusing on basic skills, students who have high academic competence are denied. Bearing in mind that teachers have a great autonomy in Finnish schools, where policy makers and school administrators can hear their voices in order to allocate appropriate policies for advanced students to excel their learning if they are willing to do so. Since, it is teacher's responsibility to identify and serve advanced students' needs.

> "*Teachers can pace their teaching, do their planning that takes into account certain students' need to proceed faster or they want to have the student stay behind in their pace, so they can give individual assignment or do other kind of acceleration.*" Lavender

Description of teachers' qualification is another barrier to incorporate acceleration. To well-served advanced students, teachers' qualification is important. Teachers mostly need to be knowledgeable about the characteristics of academically able students, as well as, gifted programs, in order to serve them adequately. According to this conception, Finnish teachers' education and training is critiqued for the lack of knowledge regarding gifted programs and pedagogies, which are considered central to develop teachers' skill to meet the educational demand for those students. Teachers usually use differentiation to meet students' academic demand, where sometimes teachers might assign busy work instead of insightful knowledge if they are not familiar with programs, research, and strategies related to gifted education. Since knowledge is power, when teachers persist effort with students who are academically able but under-performer in order to provide them with appropriate challenge, gifted pedagogies become central to make teachers' intervention meaningful. Where teachers can develop their expertize to identify diverse students' needs appropriately, on the one hand. And provide them with appropriate challenge and aid, on the other. Therefore, pointless work can be avoided and substituted with useful work to enhance their motivation and let them thrive. The following excerpts give an indication that differentiation alone is not enough and there is a need for gifted programs.

> *"Something that it's not that much talk about, Okay, we have this idea that you have to do differentiation, but when you go to the actual classroom, the context might be quite different."*

> *"Even here in teacher education if we did some modification to the curriculum, but unfortunately still, you need just to do the course, do the sitting, do the things that are required to proceed onward. I think it is something that could be developed"*

> *"I think quite a lot of actual thinking is left to the teachers, so we can give some idea, some tools for them to use…… With gifted students, we could all work as like a mentor, just like a similar way you are guiding someone in their writing process, you could do that with education but it's really time consuming and you need to be really skilled."* Lavender

This reality was highlighted by Tirri and Kuusisto (2013). Their findings described that some teachers are using busy work instead of meaningful learning experience for advanced students, section (differentiation) discussed this issue. Where the responsibility of teachers

become seen in being aware of advanced students' characteristics in order to serve them well. In which turn to let me observe the next reality.

Though Finland places a great emphasis on teacher education, as well as, on integrating students with special needs in the mainstream schooling. Where being a teacher in inclusive classroom seems to be not an easy task to fulfill the demand for all the students, including students who are identified with disability and simultaneous talent. This conception highlighted teachers' lack of knowledge regarding this issue, where teachers use to focus on being knowledgeable regarding students' deficit but acknowledge concerns their strength is not taking place in teacher education. The educator again drew attention toward the role of teacher education as a profound ground of raising teachers' awareness regarding this issue.

> *"I think the big thing for <u>teacher education would be to at least raise awareness that students might have learning disabilities and great talent at the same time</u> or at least capacity to develop their talent and then let them know that if they have one. Teachers should be able to see the other side and try to find good balance in supporting them in overcoming the learning difficulty and then promoting the gifted side."* Lavender

Moreover, the reality of this conception reveals how granting the students accelerative entry can foster their emotional feeling by boosting their self-confidence. This study addressed the socio-emotional impact for accelerant students in section (2.6)

> *"I think responding to the learning difficulties and the talent are <u>important for the socio-emotional growth of the student</u>. If they have perhaps even quite severe learning ability but they can prove that they are really talented in one area, it does really a huge thing for their self-esteem and how teachers perceive them as learners or just as students in a more general sense."* Lavender

Teachers' attitude is another barrier that constrain the successful incorporation of acceleration. Here, the conception again addressed teachers' lack of knowledge regarding acceleration, since teachers use general knowledge to justify their attitude toward acceleration, not on research base. The reality here is unsatisfied and appeal for change. since teachers are building their beliefs about acceleration based on myths. Even though, the Finnish core curriculum lift rooms for teachers to acknowledge students' academic

competences. But teachers' attitude still consider as a problematic aspect toward acceleration involvement.

> *"I don't personally think that is a problem, but I heard some teachers think quite a lot about the students who if the acknowledge giftedness and do this kind of things, the other students might feel that they are okay, so I'm not talented like him or her. I'm just a usual student who can't perform that well. <u>Teachers think about that kind of emotional impact that acceleration might have. But usually, I don't think there's much research basis to support that</u>, even in practice, <u>it is something that teachers should be able to deal with if some problems arise, so they shouldn't just preemptively decide, okay, we don't do acceleration because something might happen.</u>"* Lavender

This study dealt with teacher attitude in section (3.2). It is essential to notice that I am not saying that Finnish teachers should change their attitude toward this reality, but to discover the importance of teachers' attitude in making change. Guskey (2002, p. 385) presented a "model of teacher change", by addressing the role of teachers' attitude in adapting new pedagogical practices at school. He proposed that "neither training alone nor training followed by implementation was sufficient for affective change. These particular attitude and belief changes occurred only when training and implementation were combined with evidence of improved student learning". As teacher education in Finland is adapting a research-based practice, where teachers need research to keep themselves up with updating knowledge to promote their profession. Section (2.3.3) had a brief look about research-based practice Finland's teacher education.

Eventually, this conception viewed egalitarian society in some way neglect the development of students' talent. This conception used egalitarian society, institutional realities, negative teachers' attitude toward acceleration, teachers' lack of pedagogical skills, and lack of knowledge in teacher education regarding gifted education; to describe the obstacles that hinder the integration of gifted programs, in which turn to energize the educators' motivation to pursue change in Finnish educational settings with regard to gifted education.

> *"The Finnish system and the way that the society structures are quite <u>egalitarian</u>. <u>How can you find openings to do gifted education, raise awareness and skills of</u>*

the teachers to address those needs. It's something that has been on my mind quite a lot recently." Lavender

Finally, each conception viewed the phenomenon of acceleration from different angles. where some issues related to their concerns are answered and other lift to the reader to decide what could be done to find a balance between the two conceptions. Since both conceptions might have pros and cons. As the first question was answered, the next sub-section will answer the second research question, which is "How diverse students' needs are served in Finland?".

Most educators use the first question to allow answers for the second research question to arrive.

6.2 Differentiation to fulfill students' diverse needs.

Through differentiation, teachers can serve students' diverse needs, including the academically able students. As educators viewed acceleration as inappropriate pedagogy, because of the socio-emotional harm it caused to the child, consequently, turn to create moral crisis in school setting (first conception in question 1). Therefore, differentiation is seen appropriate, since it places so much emphasis on collaboration and students' social competences. As it mentioned in the above sub-section, differentiation is matching enrichment program, according to educators' descriptions. Educators positioned differentiation as a fruitful pedagogy within the school, resulted in several advantages for nurturing students' talents. Here, the more specific features will be spotted to avoid repetition. It is beneficial to bear in mind the participants' answers in Q1, since their answers are correlated with the Q2.

Description of educators' reality regarding the challenge to serve divers students' needs through differentiation. Where the textbook can serve academically able students too, since teachers do not use the textbook simply or follow it in a close and systematic way. Instead teachers focus on students' readiness (ability) as a start point in order to close the gap between what the students already know and what they can develop, in the basis of their preference. This way of differentiated instruction was deeply described in section (differentiation) on the basis of Tomlinson's book, who is a pioneer in differentiation.

> "Differentiation means taking into consideration the skills of the individual student when teaching, the student can be either behind or ahead of the rest of the group-tasks and working methods are planned to match the student's skills."   Sun Flower

Here, there is a straightforward equivalence between differentiation and scaffolding, both are used to achieve the same purpose, which is to support the learning experience for every child by moving him/her forward until s/he reaches the appropriate level of understanding, teachers' help is required to close the gap within students' differences and extend the actual learning potential for each student to the maximum as well. Particularly, when the child becomes unable to proceed without teachers' help in order to deal with challenging problems. Cooperation within the group is important, since peers' support enable the students to promote academic, as well as, personal competence.

> *"for example, if there is a student in the group that already knows what to do and another one has yet to master it, the teacher can instruct them to sit next to each other so that one can learn from the other, at the same time the more skilled student who act as instructor gets positive boost to self-esteem and the other one gets peer support".* Sun Flower

The previous reality echoes what Vygotsky (Vygotsky & Cole, 1978, p. 90) proposed about the zone of proximal development, which "is that learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and cooperation with his peers. Once these processes are internalized, they become part of the child's independent developmental achievement." The theoretical part in this study illustrates on this point.

Time was viewed as a social tool, which has a valuable meaning through this description. Because differentiation facilitate the students to internalize new skills and concepts. Here, the reality acknowledged the importance of social interaction in the free time available spent with peers, which allow the students to nurture the appropriate mind habits to live effectively in their society. In addition to that, students can have enough time to pursue their hobbies. Accordingly, students are more likely to utilize their creativity when they are engaged in a relaxed learning environment.

"If I go back to think about my age group, many of my friends work with the Ministry, some in the World Bank, some are working in these high positions in Nokia, they are just doing very well. You know, <u>I think it was also that we were given the basic skills but we were given a lot of freedom</u>. Some of us were playing in the bands and other were..... And I was also leading girls' club, on Mondays, for the girl age (10-12), then I was giving horse riding lessons. So there is a lot of responsibilities, anyway, that you carry on even when you are not at school."
Tulip

Therefore, this reality reflects Sahlberg's (2007) idea about free time available at school, which turn to contradict the term "merely instructional institutions". To enhance students' learning, free time should be highly considered. This time can be used to develop students' skill in communication to create *learning centers* and positive students' attitude toward learning. Particularly, when students find time at school to pursue their hobbies and passion. Instead of increasing the amount of homework. This idea mentioned in section (2.1).

Moreover, As the description placed much emphasis on social interaction, dynamic grouping is widely accepted within this reality. When teachers manage the class through dynamic group options, multiple purposes can be arrived. Through students' interaction, students can articulate their opinions and understanding, uncover their beliefs and misconceptions together. Particularly, when teachers provide them with a task which is slightly ahead of their current level of readiness. Parallel to that, the description pinpointed the value of language skills, where every student can recognize their value through constructing relationship with their peers and teachers through communication and interaction, which enable them to recognize themselves as a collective. Skills that should be nurtured through dynamic grouping. Where social tools, such as: feedback, reflections, observation and cooperation can take place. Since, these tools allow the students to engage in deep thinking that provoke students' attention toward multiple interpretations. Since authority is shared within the group, students' tension can be solved through dialogues to understand each other. According to this reality, grouping and social tools are effective way to allow the students to flourish personally, as well as, academically. In which turn to nurture essential values for effective positive outcome. Success in this reality is related to sharing and cooperating to gain mutual benefit for all the students. It seems that this reality echoes the term 'academic controversy' used by Fink (1992, p. 45). Who highlighted the

importance of dynamic grouping for advanced students to gain academic benefit, Fink described that high academically able students are more likely to engage in higher mental thinking when working in a cooperative group with diverse students, rather than working in a competitive setting or with themselves all the time. Section (2.6) describe the idea of dynamic grouping and 'academic controversy'.

> "The teacher can control the progress of the learning situation, for example, by structuring the task and forming study groups. In this way, the teacher can influence the participation of each student in the group…… Social learning takes place in a child's daily life and learning together is a very important aspect of school education. Together, the learners can share things with each other, the perspectives expand and they get peer feedback from each other. Together, the students practice the skills of conversation, listening to each other and taking into account the opinions and justifying one's own opinion. Through learning together, the child practices and learns the essential skills needed in life." Jasmine

> "for example, if there is a student in the group that already knows what to do and another one has yet to master it, the teacher can instruct them to sit next to each other so that one can learn from the other, at the same time the more skilled student who act as instructor gets positive boost to self-esteem and the other one gets peer support". Sun Flower

Student's interest holds so much emphasis with this reality. Teachers use students' readiness and interest to make the students more engaged and motivated, where student can choose from various options what attract him/her most. As students' disengagement is a major matter for low academic performance, this conception drew attention toward their assumption toward enrichment, where students can engage with enrichment activities rather than giving acceleration (skip the grade). This reality reflects what Tomlinson and Imbeau (2010) described about students' learning portfolios, where emotions and interest are central in the learning experience. Since, positive emotions evoke students' engagement, motivation and confidence, thus, play a fundamental role in academic success. Section (2.4) discussed the idea of emotion and learning profile in a detailed way.

> *"Absolutely, we promote student to learn on their own pace. This need to be done to keep alive the interest in the subject and schooling in a more general sense. Depending on the subject, the student does not need to be placed in upper grade,*

s/he can simply be given tasks/problems that match his/her skill level." Sun Flower

"I think that differentiation is a thing that we have to learn all the time because it's not easy, and our part as a special education teacher is also to consult the teachers in classrooms and we can think about the learning together, what to do? Because if we see someone that is very talented or see someone with a need for support, we can think about it together" Rose

As educators viewed themselves as responsible agents to maintain a healthy learning experience for the students, in which turn to align their role to their commitment and dedication to enhance the holistic growth of the child. Most educators perceived themselves as a role model for the children and express that in different ways. One way is to maintain healthy inclusive classroom, where issues such as equity and equality were highly considered as a priority. It seems that promoting students' ethical concerns is considered essential to foster other students' competences, within this reality. This point of view could match Vygotsky's idea about language that influence the habits of minds' construction, where students can learn how communicate with each other effectively, where they can articulate their understanding, examine their assumption and adjust their misconceptions. For example, when dealing with students with disability to build a profound understanding of mutual benefits with them. The idea of language described in chapter two.

"Another way is for the teacher to take things positively and through respecting the students' views and opinions. For me, it is so called learning from a model through observing what others do, it is an efficient way to learn and I often use it when teaching handicrafts. It is especially good for illustrating a technique with right tools. This is especially important with small students as they imitate their teachers very closely." Sun Flower

"Observing the child to grow your idea of how the child is developing. <u>It's connected with these courses (ethics & inclusion) and the society and communication with teachers</u>. The teachers always need to be aware of where do you want to take the students to, because obviously, you need to have some kind of direction planned for them". Tulip

Teachers' collaboration is highly important element not only for class-teachers' success, but to the students as well. The description here revealed the effective role of pedagogical discussion among teachers to accommodate diverse students' needs. When teachers cooperate with other teachers, they learn from each other, which turn to enhance their pedagogical skills to well-served students' diverse needs. Because teachers can reflect on their own experiences, receive feedback, and participate in peer observation; to improve their instructions. This reality agree with the idea "communities of practice" (Harris, Hargreaves, & Fink, 2008, p. 8), when teachers cooperate, synergies among schools can foster teachers' professional capacity, therefore, "professional networks are flexible and resilient in the face of crisis or misdirected system initiatives that turn out to be unsuccessful–allowing new learning and fresh solutions to emerge and fill the gap that the false starts and failures have left behind". Section (2.3.4) represent the of *communities of practice*.

> *"I think that differentiation is a thing that we have to learn all the time because it's not easy, and our part as a special education teacher is also to consult the teachers in classrooms and we can think about the learning together, what to do? Because if we see someone that is very talented or see someone with a need for support, we can think about it together."* Rose

It seems that there are accessible forms of acceleration in Finnish schools' setting. They agree on doing acceleration on condition that foster learning in equitable atmosphere. Where academic excellence is not overlooked, this idea seems to be adapted in basic schools. While in upper secondary schools. Acceleration is widely accessible. Therefore, educational excellence is a theme for upper schools' stages, in which turn to prepare the students for their future career. All the educators reveal this reality without exception to anyone.

> *"In primary schools we are looking at applying inclusive education, then in grade 7-9 teachers are quite much focusing on their subject, and sometimes the student can skip the year 8."* Tulip

> *"I think the simple answer would be that the smaller the children are the more comprehensive the education usually is, and the less academically intense."* Lavender

Accordingly, all the above-mentioned realities are perceived as a rich ground for nurturing child development and establishing more equitable and stronger learning communities. In which turn to constitute the best way to gain giftedness from their own lenses. This collective approach was seen as more convenient to urge the students forward, rather than only focusing on one academic approach. However, this comprehensive system is not lifting any student behind, since values such as cooperation, faithfulness, respect, transparency, and honest; become part of the schools' community construction. This reality reflects that the social fabrication within the school community promote brilliant outcomes to the whole society.

> *"I think we have a lot to learn. Differentiation offers more situations for the social skills development that are very beneficial… I was thinking about my school time, if I think about these intelligent friends of mine, for example, two of my friends are in my class and were bad in languages that they could hardly pass the senior secondary school, we were all trying to help them because we wanted them to carry on and manage to finish their A level. So sometimes we even went so far that we were helping them in the way that is maybe illegal in a way but we really try hard to help them."* Tulip

One more thing to notice is that when educators were asked about advanced students, the very mention of students with special-needs was acknowledged, even if the questions are not directed to those students. Therefore, this can be seen as a part of their reality, since their attitude is geared naturally toward supporting and discussing students with special-needs. The idea that Finland's education is geared toward special-need students was mentioned in section (2.2.1)

To conclude, it seems that Finland is taking care of their students' talent in a particular way, but without celebrating excellence. Since, many forms of acceleration were taking place, one of the educators experienced it personally and her daughter as well. Therefore, Finland is gaining brilliant results by celebrating equitable and equal opportunities for all the students as a collective orientation. So, I can deduce a conclusion that the second conception 'acceleration is adequate pedagogy' can be integrated within the first conception (enrichment vs acceleration). Since, Finnish primary schools are taking care of their advanced students in different qualitative way.

Now, as the aim of this research has been reached. And the two research questions were answered, and the findings have been discussed in relation to the literature and theoretical framework. All these realities were interesting to realize, particularly, the ones contain contradiction views regarding the same topic. These results provoked my curiosity regarding teacher education, in which turn to let my write a brief suggestion as the next sub-section will notify.

6.3 Conclusion

To a certain degree, this study attributes to highlight what is already exist in the Finnish context. Here, there was no intention to add something new. But the outcome findings of this study drove my intention to discuss a small suggestion. A key step here for teacher education might be to integrate the two main conceptions within educators-teachers discourse in the university. As long as, the two conceptions are existed, the need to discuss gifted education is necessary even the field is questioned. It is reasonable to make conversation among teachers, to try to juxtapose the two qualitative ways for serving divers students' needs, where teachers can deduce their own findings and then reflect. Consequently, teachers can advocate for or against and justify their opinions regarding the topic of gifted programs. Since, critical thinking is a main feature in the Finnish education, where teachers and educators can go beyond their comfort zone, instead of ignoring the entire field and stay in the comfort zone, because it is problematic. It is well-worth for educators to be aware of research related to gifted programs in order to become more persuasive in their profession, since I think, knowledge is a powerful source of power. One of five of the educators are aware of researchers concerning gifted education, but the rest of the educators were not. To be clearer, I am not saying that gifted education should be adopted in Finnish schools setting, instead, offer an opportunity to make a balance between the two main conceptions within teacher education is a further step toward educators' responsibility, since these two conceptions are there.

7. Ethical consideration

7.1 Credibility of the study

It is common to address the terms validity and reliability in quantitative research, where issues as numerical data, fixed facts are highly emphasized (Sjöström and Dahlgren, 2002, p. 342). While in qualitative research, numbers and replicability issues cannot meet the demand for understanding human dynamic experiences. In phenomenographic research, terms as trustworthiness, credibility and transferability are more relevant to refer to validity and reliability in a fairly manner. Since the focus is on human conceptions and relationship not on the phenomenon itself. Even though, it is also common to use the terms validity and reliability in qualitative research, but this study uses the term credibility to assess the overall value throughout the research process (Leung, 2015). As there is no superior standard to determine credibility, various criteria can be adapted. Sjöström and Dahlgren (2002, p. 342) define the term credibility as "a precise description of each part of the research process". Similar, credibility can be translated through consistency of the data gathering, analysis and presentation, as well as through the finding of the study (Akerlind, 2012, p. 331). Therefore, credibility is pursued through dependability, which is intertwined with the researchers' position throughout the research process. To maintain dependability, thus, credible outcome findings. Three key considerations determined by Kvale (Collier-Reed, Ingerman, & Berglund, 2009, p.5) can be emphasized: the researcher's position throughout the exercise of data gathering, data transcript, and analysis. Once has been credibility established, trustworthy become attainable as well (Collier-Reed, Ingerman, & Berglund, 2009, p. 4).

However, the challenge starts from adapting phenomenography as a methodology, researchers being aware of their own subjectivity, are more able to encounter it in order to reach more objective position. This individual subjectivity becomes part of the research construction, in which constitute researcher-research connection (Frost, Nolas, Brooks-Gordon, Esin, Holt, Mehdizadeh, & Shinebourne, 2010, p. 14). To deal with this subjectivity, Leung (2015) proposed the role of researchers being aware of their beliefs they made about their studies, which also contribute to address the researchers' background, the aim of the study, the choice of methodology, the methods, and ways of interpretation. Here, the current author would take an opportunity to acknowledge her motive for

undertaking this study, the main purpose is to understand Finnish educators' conceptions about academic acceleration, Thus, discover what is already there. There is no temptation to add something new based on this study, rather some suggestions might be surmised from the outcome findings. Undoubtedly, this position promotes the current authors' neutrality. Additionally, justification for the chosen methodology, method and interpretation of the transcript were mentioned in chapter three and four. In which turn to produce the outcome findings of this study.

By looking to another part related to the author's subjectivity is the ability to overcome his/her bias throughout the interview. The interviewer attempts to bracket his/her bias while encouraging the participants to explore. Because coherent analysis for phenomenographic study is based on deep participants' responses. The interviewer may find this purpose risky for maintaining his/her neutrality during the conversation. Since, the interview itself is a challenge for new phenomenographic researchers. Akerlind and her colleagues (2005) emphasized the role of the interviewer's neutrality while conducting the semi-structured interviews through avoiding two leading directions: the leading aspect through yes/no question, on the one hand (p. 78), and bringing up any new idea that the interviewees have not mentioned it earlier, on the other hand (p. 80). Even though it was not an easy mission to minimize the interviewer's bias or influence, but luckily, adapting three strategies proposed by Akerlind promote the authors' objectivity, as well as make deep participants' exploration arrived. These strategies are: First, the use of 'What' and 'Why' questions serve a good strategy of departure to integrate both full participants' responses and less interviewer's interference (2005, pp. 78-79). Second, when some participants are content with short answers and little examples, where further exploration is still needed in order to understand their conception truly. The author counteracts this issue by summarizing and repeating what the participants have said in her own words. So, the participants reactively confirm, modify or add feedback on the interviewer's interpretation until the core of what is being mentioned has been captured. Third, the previous two strategies are better accomplished by performing pilot interview before conducting the real ones, in order to offer a potentiality to learn and develop the necessary skills in a firsthand training experience. Thus, promoting the authors' confidence in performing successful phenomenographic interviews (pp. 80-81). This study found these strategies to be fruitful in gaining great participants' exploration while promoting the authors' ability to prevent the leading aspect as possible. Therefore, the author prepared an outline interview questions,

which are open-ended, recognizable to the Finnish context with clear language, and well-organized with 'what', 'why' and 'how' questions to assess the participants' exploration deeply and freely.

Basically, as good as the interviewer's leading has to be refrained, but it seems unrealistic to be completely objective during the conversation with the interviewees. In order to maintain faithful to the interview, this study omitted one answer that has been brought up as a response to the interviewer's influence. This happened when the author raised an idea related to the topic treated in the study, which the interviewee has not raised it earlier.

Regarding the rigor aspect, Akerlind and her colleagues (2005) illustrated that trustworthiness should be maintained by the researcher being faithful to the transcript. Since the transcript is the only content of the phenomenographic analysis. Moreover, even the interpretive nature of phenomenographic research aims to retrieve individuality on the one hand. But it creates a great challenge for the researcher to overcome his/her subjectivity through the analytical process, on the other hand. This can be achieved through the researcher considering the role of immerse him/herself in the transcript through a never-ending circle of reading the data. As the aim is to ensure the exact meaning adhere by the participants concerning the research questions. Thus, the responses are interpreted in the basis of meaning, in which the concern is not on the language itself, since the words are not necessarily reflecting what participants truly mean. Accordingly, the interest is on providing actual examples to understand the participants' intentional opinions and conceptions. Akerlind and her colleagues (2005, p. 87) talked about the value of giving actual examples: "we are not interested in the examples per se, but in using them as a medium for exploring the way in which the interviewee is thinking about or experiencing the phenomenon, that is, those aspects of the phenomenon that they show awareness of". In this study, during the analytical process, the author made her effort to return constantly to the data in order to affirm the core meaning reside within the excerpts in the original transcript before moving them from their real context. And more importantly, use the actual examples from participants' responses to confirm, contrast and refine what the participants truly mean. Consequently, develop categories of descriptions that include similarities, differences and structural relationship, which are deduced from the essence of meaning within the data in the original context.

Another source of trustworthiness mentioned by Akerlind (2012, p. 330) is *communicative validity*, which is to engage another researcher in the analysis to "encourage greater open-mindedness and awareness of alternative perspectives" (p. 328). Since, every researcher will observe the data from his/her own lens, so involving another researcher allow to reveal various lenses. Here, searching for feedback and mutual discussion with the supervisor and colleagues about the initial categorization and the interpretation is believed to be a relevant validity source for this study.

Considering subjectivity within the analytical process, Collier-Reed and his colleagues (2009) promoted trustworthy by being receptive with no prejudices, which turn to enhance the achievement of credible findings as well. This can be translated to this study by the author attempted to overcome her subjectivity through a strategy called *interpretive awareness* suggested by Sandberg (Cope, 2004, p. 10), which is "to acknowledge and explicitly deal with our subjectivity throughout the process instead of overlooking it". Therefore, the author dealt with the data open-mindedly, and put a great emphasis on considering all the conceptions that form the outcome finding as equally valuable.

Credibility can also be approached in phenomenography through the concept of *Interjudge communicability*, expressed by Säljö (Cope, 2004, p. 10) as "the communicability of categories and thus give the researcher information that someone else can see the same difference in the material as he or she has done". Therefore, this study sought to demonstrate *interjudge communicability* through the work presented in chapter four, by using participants' excerpts to show the critical characteristics which constitute the formation of the themes in the preliminary grouping, where similarities and contradictions are well backed by empirical data.

Another key consideration in phenomenographic studies is the issue of consistency of the outcome findings over the time intervals, which equates generalizability of the research findings on the basis of replicability. The demand in qualitative studies, including phenemenography, rely on discovering the uniqueness of human stories and understanding the dynamic nature of reality. Each research embraces its own construction of individuality, which represent a unique relationship between the researcher and the participants. Therefore, Marton (Sjöström and Dahlgren, 2002, p. 342) argued that seeking to replicate the same findings in phenomenographic research is not demanding nor even fruitful. Instead, he recommended adapting another strategy called *intersubjective agreement*. This

alternative term can approach reliable outcome findings through two ways according to Akerlind (2012, p. 331). The '*coder reliability check*', entails the researcher to involve another researcher to do the coding and categorization of the transcript data independently. The aim is to find compliance when comparing their categories, which allow for reliable coding. Whereas, '*dialogic reliability check*' is to increase the agreement between the two researchers through reciprocal discussion and critiques about the content of analysis. However, neither of these two sources were used in this study. Here, an alternative way was followed, proposed by Akerlind. Where the current author has far more effort to determine reliability through making a clear interpretation of the data. This can be served through clearly showing similarities and contradictions that constitute the formation of the different categories. Moreover, adapt the seven phases of data analysis, which is considered as fruitful in the basis of its ability for detailing inquiry.

7.2 Ethical Concerns

Ethical standards were adapted from the Finnish National Board on Research Integrity and preserved during the whole study in multiple ways. Usually, ethical standards are one of the critical units while conducting a research study. Where participants are involved in the process, therefore, it is important to consider their comfort and free will in taking part in the research. Here, only educators who volunteered for participation were contacted and informed about the topic. They have been contacted through various ways of communication orally, via email, and by consent letter. The researcher informed the participants about the topic and also discussed different ethical standards concerning their right to reject or withdrawal from the study when they want to do so at any time. And stated that there is no intention to make harmful and deceptive situation to the participants for personal attainment. Still, the researcher should watch carefully the progress while communicating with the participants. Where issues of discomfort and drop out sometimes become possible. Fortunately, even the majority of the participants are unknown to me since the interview, but I did not receive any clues that show discomfort during the interview process. This was considered by the interviewer as a positive feedback about her performance.

However, because the previous ethical standards care about the participants, it allows for participants' trust promotion to some extent. But it still seems a big concern for me to build

further trust, confidence, and shared respect with participants I do not know them before. Obviously, two benefits are attainable when participants' trust is acquired. Since phenomenographic interview seek to gain the depth of participants' information. Therefore, participants will not be able to share information about their stories until trustworthiness is gained. Meanwhile, the participants also might be able to suggest other qualified interviewees for the study. The latter was the status in this study, since the participants were chosen through snowball sampling. Issues of confidence were addressed through engaging with the participants with informal discussion before start performing the interviews, in which utilize a better trust relationship with the interviewer. Indeed,

Finally, to preserve anonymity and confidentiality, participants' privacy is of a high priority. Their names were substituted with nicknames. And their data and records were confidentiality ensured. Therefore, it seems reasonable to say that this study guarantees ethics accomplishment based on these ethical standards.

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Appendix 1

Interview Questions Outline:

1) What are your views about the purpose of basic education?

2) How are students' different needs and talents viewed in teacher education?

3) What do you think about academic acceleration? Why it is not much used in Finland?

4) How do you see acceleration impacting the social development of the classroom climate?

5) How does the differentiation principle promote teacher's abilities to better recognize, support and nurture different needs in regular classroom?

6) How does the stage of schooling (e.g. preschool, primary, secondary, high-school) affect teachers' interaction with different needs and talents?

7) Do you have experience of students being both talented and with special needs or disabilities? How would teacher education address needs of these students?

8) How much you are aware of (recent) research on acceleration?

9) What are your recommendations for acceleration and differentiation in Finnish teacher education?

Appendix 2

CONSENT FORM FOR PARTICIPATION

IN A RESEARCH STUDY FOR MASTER'S THESES

Description of the research

This research is for my thesis in the master's degree in "Education and Globalization" program at the University of Oulu. The purpose of the research is to learn about [*How teachers' educators view academic acceleration in Finland*].

Your participation

Your participation will involve an interview with the researcher about [*your experience of being coaches for teachers in basic education in Oulu. The data analysis will include researchers' interpretation of the discussion and direct quotes from the interviews. You may choose to actively participate in your data analysis. The researcher will be in contact with you or ask additional information during the writing process to ensure that the story reflects your opinion*].

Voluntary participation

Your participation in this research study is voluntary. You may choose not to participate, and you may withdraw your consent to participate at any time. You will not be penalized in any way should you decide not to participate or to withdraw from this study.

Risks and discomforts

There are no known risks associated with this research. Your identity, personality, and opinions will be respected and confidential in the research.

Confidentiality

The information collected and recorded during the interview will remain confidential and no information that identifies you will be made publicly available. Your name will be replaced with a pseudonym, other possible identifiers will be changed as well.

Data storage and protection

Collected data will be stored and protected under the password by the researcher. It will only be shared with people related to the research process, such as first and second supervisors. Collected data will not be used for any other purposes apart from the possible further research.

Contact information

If you have any questions or concerns about this study or if any problems arise, please contact me via following email:

[arwa.braizat@gmail.com]

Consent

I have read this consent form and have been given the opportunity to ask questions. I give my consent to participate in this study and use data collected during my interview in the research.

Participant's name:_____

Participant's email:_____

Participant's signature:_____   Date:_____

Researcher's name:

Researcher's signature:_____   Date:_____

A copy of this consent will be given to you and to the researcher.