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Finding Albert Einstein:
Detecting and strengthening talents in Chilean Education

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ABSTRACT

In Chile, the strengthening of talented students is something new. The objective of this research is to find out if Chilean schools strengthen or detect their talented students and how they do it in the year 2017. There were eight schools studied. The research methodology consisted on a survey and an interview. The results are that 100% of the teachers recognize talents, make up special activities and have science fair. Eighty-six percent of them creates a special plan and works with parents. Eighty-three percent does Olympyads. Seventy-one percent recommends students to participate in extracurricular programs and 57.2% of the teachers disagree with the support that the schools provides to enhance talented students. The conclusion is that there is a clear tendency to the acknowledgment of talented student and the teachers' willingness to enhance them, however, teachers expressed that they do not have enough support from the schools.
RESUMEN

En Chile fortalecer los talentos de los estudiantes es algo relativamente nuevo. El objetivo de esta investigación es averiguar si los colegios de la Región Metropolitana fortalecen o detectan los talentos en sus estudiantes y cómo lo hacen en el año 2017. Se estudiaron 8 colegios. El método investigativo incluyó una entrevista y una encuesta. Los resultados fueron que el 100% de los profesores reconocen talentos en sus estudiantes, realizan tareas especiales para potenciarlos y tienen feria de las ciencias. El 86% crea planes especiales y realiza reuniones con apoderados. El 83% realiza olimpiadas. El 71% recomienda programas extracurriculares y propone actividades extra y el 57.2% no se sienten apoyados por la escuela para potenciar los talentos. En conclusión se ve una tendencia clara en el reconocimiento de talentos y la disposición de los profesores para fortalecerlos, sin embargo, los docentes perciben un apoyo insuficiente por parte de la escuela.
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INTRODUCTION

Motivation. This simple word can be the missing link of all our educational institutions. Like a Holy Grail, motivation is sought deeply by every teacher around every classroom throughout the globe. We can understand this, since motivation is a key factor to engage into a real meaningful learning experience. We all know that the most powerful type of motivation is the one that lies within ourselves, the intrinsic motivation. Like a powerful fuel, it can boost our wings to get wherever we want. If you have the correct motivation, you will overcome any obstacle towards your goals.

Since motivation is so important, we must foresee ways to strengthen it and enhance it. One of the best ways to do this, is to be aware of the lacks and needs of our students, to create a suitable curriculum that can be both attractive and challenging for them. Our educational system tends to focus its efforts on the weaknesses of the children, instead of exposing the more advanced students, or gifted/talented students, to more challenging and rewarding experiences during their school years.

In this study, we will explore how our schools are dealing with the presence of gifted/talented students in our classrooms, in order to avoid the boredom and lack of motivation of this group. Are there any protocols to deal with this type of students? Are our authorities aware of their existence in their schools? Do they know what a gifted student is?

Finally, to seek an answer for these questions, we carried out a piece of a research inside Chilean classrooms, which were divided into subsidized, private, and municipal schools, to see if it is something common to observe or to work with, and how the teachers react when these students are part of their class.
CHAPTER I
RESEARCH PROBLEM FORMULATION

1.1 BACKGROUND

Despite all the studies that have been done regarding the many different types of learning styles among people (Gardner, 1996), and the well-known truth about how every single individual has specific virtues, characteristics (positive or negative) of their personalities, or their differences in cognitive development (Piaget, 1977), we still think, when we talk about gifted students, just of the ones who have superb qualities regarding physical, artistic, or musical interests.

In the first world, it is possible to find several studies about how those countries give special attention to students that show a slightly higher potential and motivation towards their learning experience (Möns & Katzko, 2005; Tannenbaum, 2000). It was understood that the development and fostering of those talented students, no matter what the subject they were interested in, was also to think about the greater good of society and, therefore, their country. As a result of the achievements, these students could reach in their future regarding their professional life, for example, in the science field, or innovation of new technologies and cultural affairs.

Repeatedly we heard about the education reform in our country, Chile, specifically in those aspects related to the quality of education. We can ask: Is that quality a real quality for all the boys and girls? Specially if the Ministry of Education and the authorities are not thinking about the children who have these special characteristics, these hidden raw potentials. Our educational system insists on aiming at the lacks of their students instead of reinforcing the potential of our children. That is the reason why Chile does not have official protocols to encourage the
detection and follow up of these hidden talents in our classrooms, which is very disappointing, especially in a country that so desperately needs to improve their standards in scientific investigation, new technologies, and basically improve the quality in education. But not everything is lost; in Chile there are some isolated programs that have been implemented to identify and develop talents. According to Benavides (2004), the first talent program to get started was in 1993 and it aimed to promote math talents in Pontificia Universidad Católica, to later on, in the year 2001, develop in a more complex program called PENTA-UC which identifies talents and offers academic programs to upgrade these talents in different academic areas such as science, math and humanities.

Do we have the resources and the knowledge to help these students? We must certainly think that most of these students can be found in the lower social classes of our society, meaning that they lack in resources in their schools and they can be surrounded by a very vulnerable environment. We can add, as studies have suggested, that these groups have been misrepresented and misunderstood in the few programs in the search for these gifted students (they can only dream of becoming a soccer player instead of a nuclear scientist). We are wasting talented students with high levels of resilience and raw intelligence due to the lack of opportunities and poor learning experiences in their schools (Borland & Wright, 2000).

In spite of all this, we must ask ourselves, what is an academic talent? Most of the time we understand talent in terms of a student being excellent or gifted in the arts or sports department only, but according to Cabrera (2007), a talent is a superior knowledge in a specific area like mathematics, science, chemistry, among others, whereas Arancibia (2009), describes a talent as general knowledge in many academic areas, or in a specific academic area as well.
There are few investigations about this topic. According to Benavides (2004), the first investigation about talents was “Talentos Matemáticos” in 1998 and then in 2001 the same author did a study about the use of ICT in gifted children.

1.2 RESEARCH PROBLEM FORMULATION

It is unknown if public, subsidized and private schools of Las Condes, Providencia, Santiago, Quinta Normal and Estación Central, promote and/or detect the talents of their students in 2017.

1.3 JUSTIFICATIONS AND RELEVANCE OF THE PROBLEM

To date, in the search for information about what was being done or studied by the authorities of Chile, regarding the development of programs that help to boost up the talents inside the classroom, the lack of information or research that we found (or could not find) was stunning. Neither the Chilean traditional education nor the Minister of Education showed any kind of study related to this matter. Rather than consider working on the hidden talents inside a classroom to improve them, they focus their attention and the hard work on strengthening the students’ weaknesses to get better results in certain tests that are required in order for those students to get into higher education, or achieve a better ranking at a national level.

According to Narea, Lissi, and Arancibia (2006), when a talent is discovered and worked out, this boosts up the children’s confidence and gives them the feeling of better opportunities for personal growth. On the other hand, when the school system insists on strengthening the weaknesses of the students, what they really do is to reinforce their insecurities and help to develop depressed and unconfident students that have a real consciousness about what their weaknesses are and also
have a clear understanding of what they will never achieve, or be good at, leading them to disappointment.

The scarcity of research in the subject of promoting talents inside the classroom in our educational system makes us believe that a study like this can promote and create an opportunity to discuss this matter in depth, revealing a real problem in terms of quality in the national curriculum design.

1.4 OBJECTIVES

GENERAL OBJECTIVE

To identify the ways in which public, subsidized and private schools in Las Condes, Providencia, Santiago, Quinta Normal and Estación Central, have strengthened or detected talents in their schools in 2017.

SPECIFIC OBJECTIVE 1

To unveil if there are any formal protocols related to the search of talents inside the classroom by public, subsidized and private schools of Las Condes, Providencia, Santiago, Quinta Normal and Estación Central in the year 2017.

SPECIFIC OBJECTIVE 2

To explain the methods that public, subsidized and private schools of Las Condes, Providencia, Santiago, Quinta Normal and Estación Central use and how they monitor these talents in the year 2017.
1.5 RESEARCH QUESTIONS

1. Are students’ talents or weaknesses strengthened and/or detected by public, subsidized, and private schools of Las Condes, Providencia, Santiago, Quinta Normal and Estación Central in the year 2017?
2. What, if any, are the formal protocols related to the search of talents inside the classroom by public, subsidized and private schools of Las Condes, Providencia, Santiago, Quinta Normal and Estación Central in the year 2017?
3. What is understood as talent in the classroom by the teachers and the school community?
4. If the talent is detected, what are the methods that public, subsidized and private schools of Las Condes, Providencia, Santiago, Quinta Normal and Estación Central use and how do they monitor these talents in the year 2017?
CHAPTER II

REFERENCE FRAME

2.1 TALENT V/S GIFTED

What is talent or giftedness?

Picture yourself watching a singer performing an astonishing song, or maybe a dancer executing movements which can defy the laws of gravity itself. Maybe you are just in the classroom looking to a child, aged 7, who shows you a drawing made by himself with a perfectly clear sense of perspective and space composition. In the two first situations, you hear somebody saying: “She is a highly talented singer” while another person would say: “She is clearly gifted as a singer”. Same thing for the dancer: “You can say some people are just gifted, look what she can do!” or “Well, that is just the fruit of hard work and talent of course”, and then you find yourself in the classroom thinking how gifted or talented that little student is. It will depend on the choice of words you will use in that very moment.

Why is this confusion between these two concepts? Well, there is no clear conception of what giftedness really is (Stoeger, 2009). Nevertheless, schools and educators often find themselves trying to grasp which students can present lacks or superior academic abilities. This may be due to the fact that the notion of giftedness has been around in our history for about a hundred years, and as stated previously, these concepts have been used in a very random way.

As regards theories of intelligence, Sternberg (1995) stated five realms to perceive talents or giftedness, which are Excellence, Rarity (among peers), Productivity, Demonstrability through different assessments, and Value of these talents for society. Nevertheless, the
most important school of thought regarding the differentiation between talent and giftedness is “ambiguity” (Gagné, 1985), therefore these two terms remain confused not only in our colloquial speech but also in academic use. “She is very gifted as a singer” or “Her performance shows lots of talent as a singer” are the two types of utterances we often use when we speak about people who show excellence in whatever they do in life. As Passow (1981) suggested, this labyrinth of definitions can go against both the procedures used to identify the gifted and the content of the programs to those special individuals identified.

Nowadays, there is a prominent definition of giftedness and talented students in the U.S., specifically in the Javits Gifted and Talented Act (National Society for the Gifted and Talented, 2013). The American Department of Education updated this definition stating that giftedness and talent can be measured regarding the levels of accomplishment of these children compared to those of others of the same age, sharing the same type of environment and access to the same quality of education. This ability can be found in the artistic, intellectual, and creative fields and in the leadership capability of these children. These marvelous attributes are not related to any economic strata or cultural backgrounds (U.S. Department of Education, 1993, p. 3).

Some other scholars do differentiate giftedness from talent from the perspective of the intelligence which is considered being separated from the other abilities of the individual. These theorists in education identify two realms regarding this topic which are General Intelligence, manifested in IQ tests, and Specific Aptitudes (talents), that can be measured by valid tests (Barbe & Renzulli, 1975). From this we can infer that emphasis is put in the differentiation of what is an innate condition in contrast with acquired abilities; thus, it is also a differentiation between capacity and performance (Gagné, 1985).
For the purposes of this study, the choice has been made to treat gifted and talented students as comprehending the same group of people; students that have potential in any area of the academic world such as mathematics, social humanities, science, music and sports, with a performance even slightly above the group where they belong to (MINEDUC, 2016); these students need special attention due to their high performance and school abilities regardless of whether these conditions could be innate. For us, they are students with special needs that cannot satisfy their high expectations in learning as a challenging experience that could boost their full potential. The terms giftedness and talent shall be used interchangeably in this study.

Arancibia (2009) suggests that even though there is clear evidence of the existence of gifted/talented students in our classrooms, which is around 10% of the universe of students, there is also an ambivalent feeling towards them. We infer from this statement, that maybe while some scholars and authorities support the idea of providing special attention to these students, others probably stay on the other end of this spectrum, and do not want to provide any special treatment for this group. Tannenbaum (2000) spoke about this sort of fear of creating a type of elite which could go against the egalitarianism which is very prominent in democratic republics.

UNESCO suggests that we should expand our understanding of egalitarianism in education, from one that wants a standard type of education for everybody, to one that can provide the same opportunities to develop and unleash the potential that every student has, despite any academic differences they may have at the beginning of the learning experience, with deep respect of the different characteristics and needs of children (UNESCO, 1994, p. 6). This lack of respect for the differences goes directly against the functioning of any society because it affects those talented students who come from the lower economic strata, since
they usually go to schools which offer them no special treatment. The result is students with higher potential completely bored and unmotivated inside classrooms, which, in the end, is a complete waste for the development of the country (García Huidobro, 2005).

Talented or gifted students compared to other children have some characteristics in their behavior that differentiates from others. This behavioral identification is made by The Three Ring Conception of Giftedness (Renzulli, 1986), which, according to Renzulli and Reis (1997, P8), posits that:

Gifted behavior consists of behaviors that reflect an interaction among three basic clusters of human traits — above average ability, high levels of task commitment, and high levels of creativity. Individuals capable of developing gifted behavior are those possessing or capable of developing this composite set of traits and applying them to any potentially valuable area of human performance.

2.2 CHILEAN EDUCATIONAL SYSTEM

To understand talents in the Chilean context, it is important to know the Chilean educational system.

The fundamental principles of the Chilean educational system were written in the Political Constitution of the Republic, approved in 1980 and amended in 2003 by Law No. 19.876, and in the new Ley General de Educación No. 20370¹, promulgated on August 17th, 2009. The new Ley General de Educación repealed the previous Ley Orgánica Constitucional

¹ General Law of Education no. 20370
de Enseñanza\textsuperscript{2} issued in 1990 and its subsequent amendments. The General Law of Education No. 20370 represents the framework for the new institutional education in the country for primary and secondary schools, while maintaining the previous regulation with respect to higher education (UNESCO, 2010, p 3).

The General Education Act of 2009 defines education as:

The process of lifelong learning encompassing the different stages of life of people and which aims to achieve its spiritual development, ethical, moral, affective, intellectual, artistic and physical, through the transmission and cultivation of values, knowledge and skills. It is framed in respect and appreciation of human rights and fundamental freedoms, multicultural diversity and peace, and our national identity, training people to lead their life in full form, to live together and participate in responsible, tolerant, supportive, and active participation in their communities, and to work and contribute to the development of the country. (Art. 2, para. 01)

The Chilean educational system is divided in four main cycles which classify the students according to their age. The first cycle, and the most important one in a student’s life, is Preschool for children up to five years old. This cycle is composed by nursery, half level, and transition level. The second cycle is Primary school, which gathers students from the age of six to thirteen years old and lasts 8 years and is divided into two levels, the first one is 1st, 2nd, 3rd, and 4th grades followed by the second level, which includes 5th, 6th, 7th, and 8th grade, the third cycle is secondary school where we can find teenagers aged fourteen to seventeen years old. The third cycle is the last one inside the mandatory

\textsuperscript{2} Constitutional Organic Law of Education.
school system and it’s composed by 1st, 2nd, 3rd, and 4th year of high school. In this cycle students can make a choice of taking technical, humanistic, mathematic, and scientific studies. Finally, the fourth and last cycle is the tertiary level, for students over eighteen years old and is composed mostly of technical institutes and universities. Unlike the primary and secondary levels, the tertiary level is not compulsory.

According to the nature of their administrative and financial dependence, there are four types of schools; municipal, subsidized, private, and public.

Municipal schools constitute the largest percentage of establishments and students enrolled in the country. These public establishments are owned and financed mainly by the state and administered by the municipalities, and they include Preschool, Primary, Secondary, Humanistic-Scientific and Technical-Professional Education levels.

Moreover, the Chilean state also provides financial support to subsidized schools. These are privately owned and managed establishments, but in the case of Preschool (2nd Transition level), Primary and Secondary schools, they receive state subsidies according to the number of students enrolled and effectively attending classes. In the case of Higher Education, the subsidized private institutions receive various contributions that are fixed annually by the national budget.

Contrastingly, there are many private establishments whose ownership, administration and financing belong to individuals and to the families of the students. These institutions exist at all levels of the educational system. Apparently, private establishments tend to have a higher quality of education.
In terms of preschool and higher education there is an additional kind of establishment. These are public establishments, which enjoy academic and administrative autonomy, but are financed by the State. At the preschool level, the establishments belong to JUNJI\(^3\) (OEI, 1993).

The Ministry of Education is responsible of creating plans and programs for all the levels; pre-school, primary and secondary school. They also evaluate and regulate the implementation of those plans and programs with a view to promoting continuous improvements.

### 2.3 TALENTS INSIDE THE CHILEAN EDUCATIONAL SYSTEM

Given all that has been said regarding what is considered as a talent, it seems important to discern and ask if the Chilean educational system has taken any actions when it comes to the encounter of a talented student in the classroom, or if there has been implemented any type of program for these students, inside or outside the classroom - as an extracurricular activity.

In terms of a talent, the “National curriculum”, which is mandatory for every school of the country and is written and revised by experts in the Chilean Ministry of Education, does not mention anything significantly relevant to this particular subject, instead it focuses on the common wealth and knowledge of the students, emphasizing the continuity of the National Curriculum bases written in 1996, and so by doing this the government standardized the education in the country. Consequently, we can assume that if a talent is discovered in a public, subsidized or private school, there will be neither sequence nor an action plan to follow by the school to boost up these talented students, missing an important chance to forge and lead to the way of success a superior and advanced student.

\(^3\) National Board of kindergartens.
On the other hand, the MINEDUC web page provides some information related to a program that is intended for academic talented students, which could be found in a certain type of classroom. The program is called “Promotion of Academic talents in public schools” and is intended for learners between the second cycle of primary education (5th - 6th - 7th - 8th grade) and 3rd of high school. The aim of this program is to help academic talented students in order to improve their knowledge through other educational institutions, like a University for example, and it prioritizes students with high vulnerability that come from public schools. The program offers these vulnerable students a scholarship - 50% of the total cost - to study extra-curricular hours in the institutions associated with the program. In order to be accepted in the program the students have to be selected by their schools, to later on take a general abilities test that administered by the institution where they would be going. Finally, from the group which takes the test, a percentage equal to, or higher than, 75%, gets in the program.

A good example of what was discussed earlier in the document is a program imparted by Universidad Católica called PENTA UC, which is taught by professors from Universidad Católica as well. The goal of this program is to enhance and deepen the knowledge of the students, also to provide them with more opportunities and enrich their character as social entities. As it was explained before, this program benefits students who are more vulnerable than others; hence, it offers an opportunity of further development to talented students, who in normal conditions could not afford it since their environment or conditions are unfortunate. The program consists of 300 extra-curricular hours of classroom instruction divided into two semesters of 120 hours each, plus 60 hours in the summer time. PENTA UC offers a variety of courses and workshops for each level of education and where the student is the one who decides the subjects to take according to his/her interests and talent. Some of the courses offered are related to natural sciences, mathematics, language,
history, philosophy, art, literature, technology, English, graphic design, robotics, music, chemistry, engineering, and architecture, among others. Along with the studies from the program the students are assigned a Student coordinator that is the nexus between the program, the students, and their families.

Unfortunately our encounter with this kind of evidence was not significantly helpful, because it's missing important information (MINEDUC Talent Program) for instance, where could the students go for extracurricular studies?, or what kind of subjects can the students select from the program?, or which establishments are involved in this academic talented program?, and while the PENTA UC program is rich in contents and it seems to help a number of students, it is a program outside the school system and it benefits a small student population, making it too selective and exclusive. In other words, this little finding brought us some hope, but it was far from giving us any answer; on the contrary, it led us to more questions that went unanswered.

As said before, there is not a guideline in the national curriculum on how to teach and foster talented students, so in most cases these students lose their opportunity to nurture those abilities.

For this reason, Chilean learners that present some kind of advanced development do not notice it, because most of the teachers are not aware or were not taught to detect nor to assess this type of learners and also, since there is not a method in the national curriculum to do this, and of course that most of the schools do not create programs to help students work on their special abilities. Additionally, we have to consider that the talented student is not the only one requiring special attention.

We generally find another kind of student inside the classroom, these students have difficulties to follow the rhythm of the class in one
special area, such as, traditional academic subjects, artistic works, or sport skills. This kind of weakness is common. According to Borah (2013, 139-143) “about 10 percent [students] are slow learners in a classroom”. It is important to distinguish it from the Special Educational Needs because the student doesn’t have the facility to understand or develop successfully a subject or area. However, with effort and patience he or she can achieve the task at hand. Although this thesis is about talents, we add questions about slow learners because it shows the other side of the coin. It is important to consider all of the situations inside the classroom and within the educational system that might influence the learning of a talented or gifted student.

According to Hertzog (2008), there are several guidelines on how to work with talented learners and how to create a proper curriculum to support and nurture these students. Talents can be shown at an early age, so it is important to know how to detect them, and one of the most important ways is paying attention to the children’s behavior, their actions, and patterns, among others. This is called the pedagogy of listening, which is based on the Reggio Emilia approach, first used in schools from Reggio Emilia, Italy. When we, as adults, really listen to children, we can notice their desires, interests and strengths, and to make this more useful, teachers have to take on the role of data collectors and inquirers, which can be related with Vygotsky’s zone of proximal development (Vygotsky, 1978) so the students will learn from concrete experience.

As said by Hertzog (2008), for a curriculum to include talents, it has to take into consideration three curricular approaches that are based in the child’s inquiries. These approaches are The Project Approach (Katz & Chard, 1998, 2000), which consists mainly in making the students choose how they want to work in a project, the project theme can be one of those specified in the national curriculum or the school curriculum, but the children, in small groups, select the topic related to the theme that they
want to work with so the teacher can see what the interests of each group are, and at the end of the project, the students will share what they did or investigated, and they will have more reasons to present what they investigated, because every group may have investigated something different.

The second approach, called “The Creative curriculum” (Dodge, 2001) is a method to plan the curriculum for children, including assessment tools and notebooks prepared with project-based investigation, so teachers can use them with their students. Those investigations are divided into three main activities, which consist in weekly planning, sample investigation and further questions to investigation.

Finally, the Reggio Emilia approach consists in listening to children, as explained before. In Reggio Emilia the curriculum is based on what the children want to study, and the teacher is a researcher and learner who creates a context so the learners can have an environment that suits their learning (Kang. J, 2007).

Adding to these guidelines, one of Renzulli’s models, The Enrichment Triad Model (1977) “[...] represents an attempt to integrate the findings on the characteristics of eminent persons into an overall design for programming for gifted and talented students.” (p. 24). This model consists of three steps, the first two types of enrichment, General Exploratory Activities and Group Training Activities, being used with all learners, not only with the gifted or talented ones. Then this leads to the third step, Individual and Small Group Investigations of Real Problems, which is focused only on gifted and talented students.

The first type of enrichment consists in making a connection with the students’ real interests, which are related with topics they have to
study, so they will want to investigate in depth those certain themes. Although for the students to show real interest, the classroom where they have to investigate the topics has to be stocked with resources and information that are representative of those themes.

Type two of enrichment focuses on all the methods that concerned students' development of thinking and feeling, and their responses to the activities, which will show what the learner brings to the learning that makes him or her gifted.

The third and final type of enrichment combines a three-step method regarding both the student and the teacher. Students become investigators of real problems using different types of inquiries, while the teachers, who has three responsibilities during this process, helps the students to translate their interest into solvable problems. At the same time, teachers have the task of providing the learners with the proper tools to inquire. And the final responsibility of the teacher is to help the students demonstrate their finding in a meaningful manner. This can be achieved by looking for an appropriate audience.
CHAPTER III

METHODOLOGICAL FRAMEWORK

3.1 METHODOLOGY

a) RESEARCH PARADIGM

The research paradigm is a mixture of quantitative and qualitative research due to the instruments that would be applied in the investigation.

On one hand, we have the quantitative research, where the questionnaire made for the schools is going to provide us some statistic information and so we can collect the numeric data and interpreted with no emotional filter, but with objectivity. Furthermore, the instrument consists only of specific questions made in order to answer our research questions, so as a result the answers that the researchers get are closer to the real context and are not affected or influenced by the researchers. In other words, the answers obtained are reliable due the nature of the process.

On the other hand, we have the qualitative research, where the questionnaire made for the teachers is going to provide us with information about a specific problem but admits subjectivity. In this type of research, the researcher is allowed to get close to the studied phenomenon, and filter the information through his/her eyes. The main idea is to understand the people, the problem, the circumstances, and the environment, among others. The collected data is highly profound and significantly, it is soft data.
b) **SCOPE OF THE RESEARCH:**

The scope of the research is descriptive, given that it does not follow an hypothesis question and it is meant to describe a situation, and it does not give an answer nor prejudge the problem.

c) **RESEARCH DESIGN:**

The research design it is non-experimental because its variables are not manipulated by the researchers. In this case the phenomenon would be observed in their natural environment during a limited period of time, and so the temporality of the research would be transversal.

**3.2 POPULATION AND SAMPLE:**

The participants in our research will be twenty-four teachers from eight different schools. These schools are located in four municipalities which are Las Condes, Providencia, Santiago, Estación Central and Quinta Normal.

The schools are:
- School 1 (Las Condes, private)
- School 2 (Las Condes, private)
- School 3 (Estación Central, subsidized)
- School 4 (Estación Central, municipal)
- School 5 (Providencia, private)
- School 6 (Providencia, private)
- School 7 (Quinta Normal, subsidized)
- School 8 (Santiago, municipal)
In this sample there are three municipal schools, three private schools and two subsidized schools. This selection is a random sample and it represents 13% of the municipalities located in the Metropolitan Region.

3.3 INSTRUMENTS

To make possible our research and to obtain all the information needed, we used two different instruments, the first one addressed to the principal or the Pedagogical-Technical unit manager in each school, making a total of 8 schools. The interview had a total of 19 open questions. This qualitative instrument’s goal was to acknowledge the context of the schools, if they were aware of talented and academic weakened students in their institutes, and how they feel about it.

The second instrument was a survey, composed by 22 questions that are divided in five parts, which are composed by simple answers (yes/no), open questions, multiple choice, Likert scale and numerical scale. The head teacher of any department, making a total of 8 surveys, answered these instruments. The main objective of this survey was to measure the teachers’ actions towards talented and academic weakened students.

3.4 ETHICAL ASPECTS

Our current research was made under the ethical aspects suggested by Bryman and Bell (2007), in order to ensure the quality and integrity of our investigation, plus an independent and impartial spirit in the whole process.

Our entrance in every educational institution, which were part of our research, was through a letter of recommendation given by our
university, and then, an interview with the authorities of every school where they were fully informed about the objectives of our research, in order to have full consent to develop our study.

The identities of the teachers who were interviewed are protected and remain anonymous until today, and they agree to participate by their own will without being coerced by the researchers. The questionnaires and surveys were held under any type of threat nor harm for both the interviewers and the interviewed. We maintained the highest level of objectivity in the discussions and analysis that we, as researchers, made throughout the process.

3.5 ANALYSIS PLAN

This research is a descriptive type of study, also exploratory. It is sought to probe quantitatively those factors that relate the teacher along with a clear aim regarding the development of gifted students. From text analysis and metrics associated to each question, we will explore particular trends to every dimension.

These dimensions are the following:
- To know the teacher's context
- To know about their motivations
- To know about their practices
- To know their opinions
- To know the outcomes of their actions

Using the three main actions previously mentioned the teachers can boost special talents. We encouraged them to prioritize their favorite actions; also, they could add a new action if they wanted. We identified their main actions through a ranking system created from the questionnaire, in addition to, a long answer format.
The open or long answer, format in quantitative survey was normalized with a standard pairing which helped with their grouping and later qualification.

The multiple-choice questions allowed the creation of a ranking system. Furthermore, they can differentiate between the teachers’ personal efforts versus the school initiatives.

The items in the Likert scale summarize the qualities the teachers are expected to have in relation to the development of talents and weaknesses in the classroom. The benefit of the scale is that it shows whether teachers hold strong opinions. Analysis of the questionnaire can be done by grouping or individually.

Finally, the metrics helped us to understand the teachers’ perception of their impact and influence in the development of talented students in their class.
CHAPTER IV

DATA ANALYSIS

4.1 INTRODUCTION

In the following pages, we present the data collected regarding our research questions, previously presented in 1.5. We used two instruments for this purpose, which were a survey directed to the teachers and an interview directed to the Technical Pedagogical unit manager. These instruments were applied to eight different schools in Santiago. The results are presented according to the different types of financial support of these institutions (public, subsidized, and private), regardless of their actual location in the city.

4.2 PRESENTATION OF RESULTS

The following pages will present the results gathered through the application of both our quantitative and qualitative instruments to the educational communities of 8 schools, which are located in Las Condes, Providencia, Estación Central, Santiago, and Quinta Normal. The charts will be presented with clear explanations, so you cannot miss the information presented on them. We will start showing the surveys answered by the teachers in the private institutions, then the public institutions to finalize with the subsidized sector. Later, we will present a general summary of the qualitative instrument.
4.2.1 TEACHER SURVEY: PRIVATE SCHOOL

In the following Chart 4.1 are the results of the Private School Survey Dimension 1 “Teacher’s detection and special planning on talents and weaknesses”.

![Chart 4.1: Teacher’s detection and special planning on talents and weaknesses.](image)

All the teachers in private schools that were interviewed recognize talents as well as slow learners in their classrooms and they all create special plans for both.
In this Chart 4.2 are the results of the answers of private schools' survey dimension 2 “Actions applied to strengthen talents and weaknesses”

**Chart 4.2: Actions applied to strengthen talents and weaknesses.**

4 B1; B2

5 A, B, C, D, E, F, G, H stands for types of activities

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4 B1 deals with Talented students; B2 deals with slow learners

5 A: Se trabaja con los padres para crear un plan de desarrollo del alumno
B: Fomento de actividades especiales
C: Tareas especiales
D: Trato diferenciado del resto de los alumnos
E: Se le explica al alumno lo que se está buscando potenciar
F: No se busca generar un trabajo especial
G: Ninguna de las anteriores
H: Otro
To foster talents (B1), 50% of the teachers work side by side with parents; “special activities” is an option that 100% of the teachers used. While a 75% give students specialized homework, only a 25% treat talented students differently; 50% answered that they explain to the students what they are seeking to foster, and finally just 25% use another type of action that they think is appropriate.

To deal with slow learners (B2), 100% of the teachers work with the students' parents, making specialized activities and giving the students specialized homework too. Treating the student differently is also done by just 25%, as well as explaining what they are trying to strengthen.

Having all this data we can see a tendency in the activities for slow learners, which are repeated themselves among the teachers, differently from the selection of activities to work with talented students, where there is a slight variation among the teachers.

Chart 4.3 shows the results of the survey made to private schools: dimension 3 “Talented and slow learners’ necessities; resources and activities to improve weaknesses and strengthen talents”

![Chart 4.3](chart.png)
For C1, 75% of teachers prefer giving their students extra work, while with C2 students, 75% of the teachers give a special treatment to slow learners, 50% of the teachers give them extra work as well, and 50% of the teachers favor additional activities.

Now, in C3, the application of resource 1 is used by a 25%, the same happens with resources 2, 4 and 6. On the other hand, we can see 100% of the teachers made use of resources 3 and 5.

For question C4, the application of activity 1 is used by a 50%, activity 3 is also used by a 50%, the most used activity is number 2, with a 75% and the less used ones are activities 4 and 5, with a 25% each.

The next Chart 4.4 are the results of the survey of private schools: dimension 4 “Teacher's perspective”.

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6 C1; C2; A, B, C, D
7 C3; C4; A, B, C, D, F
Chart 4.4: Teacher's perspective

For statement D.1, 50% strongly agree that is very important to identify talents individually, and 50% agree with this statement. One hundred percent strongly agree with the detection of weaknesses individually as well (D1.1). In D1.2, 50% strongly agree on doing extra curricular activities, and the other 50% agree with this. In statement D1.3, 75% do consider themselves as specialists on dealing with special talents, and 25% are indifferent about this statement. As for D1.4, 75% agree that you should not establish the same parameters to assess all the students inside the classroom, yet there are still a 25% of teachers that thinks that all students should be evaluated equally. Seventy-five percent strongly agree with D1.5, which is related to the support they have from the school, while 25% are indifferent with this. In statement D1.6, 50% agree that the schools provide with resources, 25% strongly agree with this, and 25% disagree regarding this statement. For statement D1.7, 50% strongly agree that the schools support the fostering of weak students, and 50% agree with this. Finally, 75% agree with D1.8, which is related with the resources the school gives to deal with weaknesses, and 25% strongly agree.

In the following Chart 4.5, we can see the results of the survey made in private schools related to dimension 5: “Year’s retake and promotion average”:

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8 D1: Considero altamente importante identificar los talentos de los estudiantes de manera individual
D1.1: Considero altamente importante identificar las debilidades de los estudiantes de manera individual
D 1.2 Considero importante realizar un trabajo adicional
D 1.3 Me considero especialista para tratar talentos especiales
D 1.4 Es correcto que no se exija por igual a todos los estudiantes dentro de la sala de clases
D 1.5 El colegio me apoya en potenciar este desarrollo de talentos especiales en cada alumno que se detecte.
D 1.6 El colegio me entrega los recursos (tiempo, dinero, facilidades, etc.) para potenciar estos talentos especiales.
D 1.7 El colegio me apoya en mejorar las debilidades en cada alumno que se detecte.
D 1.8 El colegio me entrega los recursos (tiempo, dinero, facilidades, etc.) para mejorar estas debilidades.
In 100% of the schools, the number of students who retake a year is one. For question E1.1, 50% of the schools do not promote students for their outstanding performance through the year, and the other half only promote 1 student each. Finally, 75% of the teachers do not feel responsible for the results of their talented students.

**4.2.2 TEACHER SURVEY: PUBLIC SCHOOL**

In the following Chart 4.6 are the results of the Public-School survey, dimension 1, “Teacher’s detection and special planning on talents and weaknesses”
Chart 4.6: Teacher's detection and special planification on talents and weaknesses.

In this chart we can appreciate that 87.5% of teachers detect and make special plans for both talented and slow learners.
In Chart 4.7 are the results of the answers of public schools survey, dimension 2, “Actions applied to strengthen talents and weaknesses”:

![Chart 4.7: Actions applied to strengthen talents and weaknesses.](image)

For talented students “B1”, 100% used activity C, 50% used activity B and activity D was used by 50%, as well. In the case of slow learners (B2), 50% of teachers used activity A, 50% used activity B, 50% used activity C, 50% used activity D, and 50% used another activity selected by him/her, demonstrating that the activities differ among teachers.

The following Chart 4.8 shows the results of the survey made to public schools, dimension 3, “Talented and slow learners’ necessities; resources and activities to improve weaknesses and strengthen talents”

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10 B1 deals with Talented students; B2 deals with slow learners
11 A: Se trabaja con los padres para crear un plan de desarrollo del alumno
B: Fomento de actividades especiales
C: Tareas especiales
D: Trato diferenciado del resto de los alumnos
E: Se le explica al alumno lo que se está buscando potenciar
F: No se busca generar un trabajo especial
G: Ninguna de las anteriores
H: Otro
Chart 4.8: Talented and slow learners’ necessities; resources and activities to improve weaknesses and strengthen talents.

With talented students (C1), 100% used activity C (extracurricular activities), 50% activity B (extra work) and 50% activity D (others). With slow learners (C2), 50% used activity A (special treatment), 50% used activity B (extra work), 50% activity C (extracurricular activities), and 50% activity D (others).

As resources, it is seen that 50% used resource B (science fair), C (talents show), and D (debate), while 100% used resource E (fun activities). Regarding the activities used in the school (C4), A (Olympiads)

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12 C1; C2; A, B, C, D
13 C3; C4; A, B, C, D, E, F
is used by a 50%, B (science fair) by a 50% as well as C (talents show), D (debate), E (fun activities), and F (others). With this information, it is clearly represented that all the C4 activities were used. For C1 and C2 the activities used were practically the same. There isn't a difference in the approaches for both types of learners.

![Chart 4.9: Teacher's perspective](image)

For statement D1, 50% strongly agree, and 50% agree. In D1.1, 50% strongly agree and 50% agree. One hundred percent agree with D1.2. Statement D1.3 shows that 50% are indifferent and 50% disagree. We can see that in D1.4, 50% agree and 50% disagree. Fifty percent of

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14 D1: Considero altamente importante identificar los talentos de los estudiantes de manera individual
D1.1: Considero altamente importante identificar las debilidades de los estudiantes de manera individual
D1.2 Considero importante realizar un trabajo adicional
D1.3 Me considero especialista para tratar talentos especiales
D1.4 Es correcto que no se exija por igual a todos los estudiantes dentro de la sala de clases
D1.5 El colegio me apoya en potenciar este desarrollo de talentos especiales en cada alumno que se detecte.
D1.6 El colegio me entrega los recursos (tiempo, dinero, facilidades, etc) para potenciar estos talentos especiales.
D1.7 El colegio me apoya en mejorar las debilidades en cada alumno que se detecte.
D1.8 El colegio me entrega los recursos (tiempo, dinero, facilidades, etc) para mejorar estas debilidades.
the teachers strongly agree with D1.5, while 50% are indifferent. Fifty percent strongly agree with statements D1.6, D1.7 and D1.8, while 50% strongly disagree.

In the following Chart 4.10 we can see the results of the survey made in public schools related to dimension 5, “Year’s retake and promotion average”:

![Chart 4.10: Year's retake and promotion average](image)

Fifty percent of the schools allowed more than 5 students to be promoted early, given their outstanding performance during the year and the other 50% only one student. However, the rate of students that have to retake a year is also more than 5 in 50% of the schools, while in the other 50% only two have to retake a year, besides, 50% of the teachers do not feel responsible for these averages.

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E1: ¿Cuál es el promedio de alumnos que repiten por año?
E1.1: ¿Cuál es el promedio de los alumnos que son promovidos a avanzar un año más por su excelente rendimiento?
E1.2: ¿Considera que los resultados de la pregunta anterior, refleja parte de su trabajo al potenciar los talentos especiales con los alumnos?
4.2.3 TEACHER SURVEY: SUBSIDIZED SCHOOL

In the following Chart 4.11 are the results of the subsidized School survey, Dimension 1, “Teacher’s detection and special planning on talents and weaknesses”:

![Chart 4.11: Teacher’s detection and special planning on talents and weaknesses.](image)

One hundred percent of teachers detect and make special planning for both talented and slow learners.
In Chart 4.12 are the results of the answers of subsidized schools survey, dimension 2, “Actions applied to strengthen talents and weaknesses”

**Chart 4.12: Actions applied to strengthen talents and weaknesses.**

16 B1; B2
17 A, B, C, D, E, F, G, H stand for types of activities.

One hundred percent used activities B and C and 50% used activity E when working with talented students. On the other hand, we see that the activities vary considering that activities A, C, D are used by 50% and activity B by a 100% of the teachers.

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16 B1 deals with Talented students; B2 deals with slow learners
17 A: Se trabaja con los padres para crear un plan de desarrollo del alumno
B: Fomento de actividades especiales
C: Tareas especiales
D: Trato diferenciado del resto de los alumnos
E: Se le explica al alumno lo que se está buscando potenciar
F: No se busca generar un trabajo especial
G: Ninguna de las anteriores
H: Otro
The following Chart 4.13 shows the results of the survey made to subsidized schools, Dimension 3, “Talented and slow learners’ necessities; resources and activities to improve weaknesses and strengthen talents”

![Dimension 3 Subsidized Schools Chart]

**Chart 4.13:** Talented and slow learners’ necessities; resources and activities to improve weaknesses and strengthen talents.

18 C1; C2; A, B, C, D
19 C3; C4; A, B, C, D, E, F

For students in the category C1, 100% used activity C, while for students in the category C2, 50% used activity B and 50% used activity C. The resources of preference were A, B, and C, each of which was used by a 100% of teachers.

With regard to activities used in the school, 100% of the teachers used activities A, B, and D, while activities C and E were used by a 50%.

18 C1, Stands for talented students; C2, stands for slow learners; A: Trato especial, B: Trabajos extras, C: Actividades extraordinarias, D: Otro
19 C3, stands for resources or tools used in the school; A: Recurso 1 (Talleres de refuerzo durante las tardes para los alumnos que tienen malas notas) B: Recurso 2 (Recomendar estudiantes con talentos a participar en programas extracurriculares. Penta UC) C: Recurso 3 (Reunión con apoderados y búsqueda de tutor) D: Recurso 4 (Entrevista con los alumnos para averiguar sobre su debilidad/talento) E: Recurso 5 (Proporcionar actividades extra dentro de la clase para mejorar o potenciar el rendimiento. propios del profesor)
C4, stands for activities used in the school; A: Actividad 1 (Olimpiadas.) B: Actividad 2 (Feria de ciencias.), C: Actividad 3 (Show de talentos.), D: Actividad 4 (Debates.), E: Actividad 5 (Actividades Lúdicas), F: Otro
In Chart 4.14 we can see the results of the survey of subsidized schools according to Dimension 4, "Teacher's perspective":

![Chart of Teacher's perspective results]

**Chart 4.14: Teacher's perspective**

20 D1; D1.1; D1.2; D1.3; D1.4; D1.5; D1.6; D1.7; D1.8

One hundred percent strongly agree with categories D1, D1.1, D1.2 and D1.3. As for statement D1.4, 50% strongly agree and 50% disagree. Regarding D1.5, 50% strongly agree and 50% agree. For statement D1.6, 50% agree, however 50% disagree. 50% strongly agree

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20 D1: Considero altamente importante identificar los talentos de los estudiantes de manera individual
D1.1: Considero altamente importante identificar las debilidades de los estudiantes de manera individual
D1.2 Considero importante realizar un trabajo adicional
D1.3 Me considero especialista para tratar talentos especiales
D1.4 Es correcto que no se exija por igual a todos los estudiantes dentro de la sala de clases
D1.5 El colegio me apoya en potenciar este desarrollo de talentos especiales en cada alumno que se detecte.
D1.6 El colegio me entrega los recursos (tiempo, dinero, facilidades, etc.) para potenciar estos talentos especiales.
D1.7 El colegio me apoya en mejorar las debilidades en cada alumno que se detecte.
D1.8 El colegio me entrega los recursos (tiempo, dinero, facilidades, etc.) para mejorar estas debilidades.
and 50% agree in D1.7. Finally, 50% strongly agree with D1.8, as opposed to the 50% that disagree.

In Chart 4.15 we can see the results of the survey made in subsidized schools related to Dimension 5, “Year’s retake and promotion average”:

![Chart 4.15: Year's retake and promotion average](image)

Teachers do not have such information.

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21 E1; E1.1; E1.2

E1: ¿Cuál es el promedio de alumnos que repiten por año?
E1.1: ¿Cuál es el promedio de los alumnos que son promovidos a avanzar un año más por su excelente rendimiento?
E1.2: ¿Considera que los resultados de la pregunta anterior, refleja parte de su trabajo al potenciar los talentos especiales con los alumnos?
4.2.4 SUMMARY

There is a clear tendency that deals with the willingness of the teachers regarding the detection of talents and weakness in their students, following with the possibility of improving these features. Nevertheless, this clear tendency is right next to another strong perception among the teachers, which is: despite the support of their schools in order to find both talented and weak students, the actual support dealing with resources, money, time, or whatsoever, is not sufficient to reach the teacher’s goals dealing with this subject. Especially, in the support of talented students (57.2 % said that they disagree or strongly disagree with the type of support they get from the school, versus 28.6% that think the same, but for the weak students instead).

GENERAL ANALYSIS OF THE QUALITATIVE INSTRUMENT

To begin with the analysis, we decided to give codenames to start categorizing definitions, concepts and practices that were acknowledged by UTP, so this would give us an idea on how they proceed in cases where they had to face talents and weaknesses. Starting with two principal codenames: "Talents" which UTP considered students that are above the average, students that have abilities, they are skilled or more capable, they stand out physically and cognitively and have the will to go further. The other codename was Weaknesses, which they consider a feature of students who have difficulties, their learning rhythm is under the average, they lack some skills; also, they state that these weaknesses could cause secondary effects, as demotivation, and they misinterpret the concept with Special Educational Needs (SEN). Why misinterpret? As said before, there is a group of students known as slow learners, who have difficulties keeping the pace, who does not necessarily mean that they have Special Educational Needs. Another codename that we thought had a
transcendental importance was the Detection of Talents and Weaknesses, as, in the UTP workers’ own words, this could lead to equal opportunities among both types of students, leaving no one behind.

Continuing with what we found was essential to the development in the schools’ work towards these students. We chose the codename Address Talents and Weaknesses as a starting point in the methods or programs they would create. Regarding talents, the method that they mentioned were, first of all “teachers’ observation”, then challenging the talented ones, asking them to be monitors of the slow learners, making them participate in different workshops or programs, such as a Cambridge program implemented in one of the private schools in Providencia. On the other hand, when they were asked about weaknesses, the main and most repeated answer was referring the student to the Educational Psychologist. Another very common answer was levelling the students, so they would not be so far behind their peers. They also mentioned they create workshops for them to participate, asking teachers to adjust their methodologies; and also, they would seek guidance from the PIE Program (if the schools had one).

4.2.5 SUMMARY

The Technical Pedagogical unit manager in each school, answered the interviews in a very similar way, even though each school belongs to different social strata. They all agree on the importance of early detection and support of talented and weak students. How? The clear majority stated that complementary activities, along with workshops as extra-curricular activities, math and science fairs, are great tools to deal with these students. However, their vision regarding the weaknesses in the students caught our eye, since half of them pointed SEN (Special Educational Needs) as part of the weakness, which is a misunderstanding of basic concepts.
4.3 DATA ANALYSIS AND INTERPRETATION

In this chapter we will analyze and contrast the information gathered in our surveys in chapter 4.2 against our research questions in order to find out if our assumptions were achieved.

4.3.1 RESEARCH QUESTION 1: Are talents or weaknesses in the students strengthened and/or detected by public, subsidized and private schools of Las Condes, Providencia, Santiago, Quinta Normal and Estación Central in the year 2017?

It was a pleasant surprise to notice that, nowadays, talents and weaknesses in students are being detected by any type of schools, despite their resources, location, and social strata. According, of course, to the possibilities of their human and material resources. Still, there is a tendency to give a bigger support to those students that can present difficulties in their learning processes: “…First and foremost, it is the weak students who catch the attention because of their academic results in the assessments" (Unit Manager 4) and “to deal with weaknesses demands lots of efforts and time for the teachers” (Unit Manager 7) are some of the statements said by Technical Pedagogical unit managers; however, there are some efforts to stimulate and motivate those students that are on the other end of the spectrum: the talented ones. Nonetheless, as shown in Chart 4.6 (p. 31), not all public schools have the willingness or resources to deal with the detection of these students.

4.3.2 RESEARCH QUESTION 2: What, if any, are the formal protocols related to the search of talents inside the classroom by public, subsidized and private schools of Las Condes, Providencia, Santiago, Quinta Normal and Estación Central in the year 2017?
According to the Technical Pedagogical unit managers of each school, the teacher is the one that stands in the front line, and who must settle which of his/her students present some special talents or deficits in their learning experiences, despite the location and type of school. Therefore, all the pressure lies on the shoulders of the teacher and his/her sensibility and observation skills.

“We must work with our teachers to make them feel more competent regarding this subject (talents and weaknesses detection)” (Unit Manager 1) plus “Strategies related to coaching and leadership is highly required among the teachers” (Unit Manager 3) and “Teachers generate their own strategies to deal with talented students” (Unit Manager 7) are some of the statements we collected throughout the interviews, and show what we stated before: all the responsibility lies on the teacher.

So, we can conclude that there are no standard protocols related to the searching of talents inside the classroom, apart from the pure observation skills of the teacher.

**4.3.3 RESEARCH QUESTION 3: What is understood as talent in the classroom by the teachers and the school community?**

Both teachers and the school community, represented by the Technical Pedagogical unit manager, agree that talent is “an innate ability that goes beyond the average” (Unit Manager 1), and these features could be physical or cognitive skills along with “a strong determination to search for deeper understanding of the contents given by the school” (Unit Manager 8) and, sometimes, natural leadership among peers.

Also, we asked for a definition of the other side of the coin, that is, who the slow learners are, and they provided misleading views seeing the Special Educational Needs as a characteristic of them, instead of
recognizing them as mere differences in the way SEN children can learn, as we can see in the following statements: “we make referrals to the differential teacher” (Unit Manager 5), “In the classroom, we can have the support of the differential teacher to work with the weak students” (Teacher 3) “We have 60 places for our PIE program for those students who present weaknesses, plus the SEP program” (Unit Manager 4), “In the case of weaknesses, we have special reinforcement programs along with the PIE program” (Unit Manager 3), and “there is a special procedure to detect students with permanent or transitory weaknesses…” (Unit Manager 2).

4.3.4 RESEARCH QUESTION 4: If the talent is detected, what are the methods that public, subsidized, and private schools of Las Condes, Providencia, Santiago, Quinta Normal and Estación Central use and how do they monitor these talents in the year 2017?

Once the talent is detected, the response of the institution will vary according to the resources of the school, and its pedagogical views that allow them to have a myriad of possibilities for their students that go from workshops during or after classes, to special programs developed by Cambridge University, in the case of private schools. The alternatives in the methods and strategies in these private institutions is very notorious in the case of talented students. However, the work with weak students remain in a more similar way, meaning the strategies they use, activities and so on, as it can be seen in Chart 4.2 (p. 26). The existence of external programs such as PENTAUC or SIP has made easier the task of guiding the talents of these young learners in the subsidized institutions. “Strategies related to coaching and leadership is highly required among the teachers”, as one of the Pedagogical Technical unit managers stated. Nevertheless, according to Chart 4.7 (p. 32), public schools can only afford special workshops, which represents a clear sign of the inequality in the opportunities for those of lower social strata.
4.4 SUMMARY

To sum up, we could attest to the existence of special programs and/or extracurricular activities with talented students along with the typical concerns that weaknesses in the students may provoke in the educational strategies of every school. Especially in private schools, there are a wide range of alternatives for talented students that go from specialized international programs, such as the Cambridge University program, to a variety of workshops, science fairs, and extra activities. The only sour point is that only 88% of the public schools have the possibilities to deal with talented students with attractive programs which can motivate these young learners.
CHAPTER V
DISCUSSION

5.1 CONCLUSION

The results of our investigation gave us a clear impression of the actual work with gifted students in our educational system. Although we were very skeptical at the beginning of this study, due to the economic differences that everybody can see between each social stratum in our country, we could find a transversal positive attitude in favor of the detection and work with talented students in our classrooms. Let us analyze these findings, and if our research questions were answered or not.

First and foremost, the notion of gifted/talented student as a concept is very close to what previous studies have presented. Most of the teachers and Unit Managers agreed that this concept can be applied to those students who seek excellence in whatever they do, therefore, are at a different level among their peers, and their work is easily demonstrable through a constant production and participation in the different activities the schools propose to them. These characteristics perceived by the educational community resembles the theories of intelligence, such as Stenberg’s (1995), who stated five realms to perceive talents or giftedness, which are Excellence, Rarity, Productivity, Demonstrability and Value.

We had a feeling that maybe while part of the educational communities would support the idea of providing special attention to talented students, others could reject this possibility just to avoid the creation of an elite among the whole universe of students, which could go
against the idea of egalitarianism, as stated by Tannenbaum (2000). Nevertheless, the necessity to find and enhance the natural abilities of this group of students is an idea that was present in every school we visited.

The problem we have witnessed lies in the misunderstandings of key concepts such as Special Educational Needs versus weak students, so the PIE specialized program is a priority in every school, and experts are constantly working with this universe of students. This provided a glimpse of the importance the authorities still give to the academical weaknesses instead of the strengths other students may have.

In addition, the huge weight lies upon the teacher’s shoulders since the detection and work with talented students lies directly in their capacity to observe different patterns that can expose these gifted students. As we stated in the analysis of the surveys, there was a clear tendency to perceive a lack of support from the schools regarding resources, money, and time so the teachers can reach their goals in the detection of talents and weaknesses in their students.

Garcia Huidobro (2005) stated the perils of having students with higher potential completely bored and unmotivated inside our classrooms who turn themselves into a complete waste of talent for the country. As Chart 4.6 displayed, not every public school has the resources and the willingness from the teachers regarding the detection and special planning on talents or even on weaknesses. On the other hand, both private and subsidized schools presented the protocols to deal with talented and weak students, as shown in Charts 4.1 (p.25) and 4.11 (p.36) If we bear in mind the statement mentioned above, the lack of protocols about this subject goes in direct detriment of the lower strata of our society, enhancing the already brutal differences and inequality in our country.
To summarize, reaching out the end of our work, we can certainly conclude that our research did answer our problem and research questions. Prior to the beginning of our thesis, and regarding our own experiences when we were students and in our practicums, we were not sure if the detection or strengthening of talents was a normal practice, and given that this has not been recognized by the Ministry of Education and its curriculum, the expectations of a positive answer to our problem were not high. After reviewing the instruments applied to the schools we were surprised when we saw that every single teacher and UTP member did recognize, and in the case of teachers, foster the talented students, in addition to the preparation of special workshops and materials, as part of the teachers’ efforts to help these students. However, and in their own words, it was difficult for most of them to go further with their efforts, given that they did not receive monetary support from the schools. Therefore, we could see that most of the schools do not have programs aimed to these students’ necessities, just the will of teachers to try and do their best.

Regarding the answers to our research questions, we can say that we succeeded in finding out what we wanted. The first question Are talents or weaknesses in the students strengthened and/or detected by public, subsidized and private schools of Las Condes, Providencia, Santiago, Quinta Normal and Estación Central in the year 2017? Led us to the conclusion that students with these characteristics were fostered by the teachers of each school. They were interested in helping to develop both their talents and weaknesses, but placing an emphasis on weaknesses more than anything else. However, taking in consideration the answer to question two: What, if any, are the formal protocols related to the search of talents inside the classroom by public, subsidized and private schools of Las Condes, Providencia, Santiago, Quinta Normal and Estación Central in the year 2017? We realized that, as said in the theoretical framework, the National Curriculum (MINEDUC) does not
include planning for talented students, so the protocols used are mainly the observation made by the teacher inside the classroom, making them the only ones responsible to find these talented students.

For question three, What is understood as talent in the classroom by the teachers and the school community? We reached the conclusion that teachers as well as UTP consider talented students as someone that has potential in any area of the academic world such as mathematics, social humanities, science, music and sports, with a performance even slightly above the group where they belong (MINEDUC, 2016), demonstrating a general understanding of what a talented student is.

Finally, the conclusion for question four: If the talent is detected, what are the methods that public, subsidized and private schools of Las Condes, Providencia, Santiago, Quinta Normal and Estación Central use and how do they monitor these talents in the year 2017? showed us that the practices and/or activities done for talented students vary from teacher to teacher, and from school to school; for example, in a private school, students have a variety of options to choose and to receive help from teachers and special programs, contrary to a student from a public school, who would not receive the same quality or even variety of activities to develop his/her talents, generating a tremendous gap between strata.

5.2 LIMITATIONS OF THE STUDY AND SUGGESTIONS FOR FUTURE RESEARCH

To detect and strengthen talented students inside the educational system is fundamental for the future of the country because it allows students to fully develop their knowledge in order to contribute to our society. We consider that this research is the first step to a deeper understanding related to this topic and it is essential to continue to do more research like this, but with a much larger sample.
One of the most important limitations of this research was that the sample was too small, indeed. Also, the amount of time given to do the research was another constraining factor that could be improved to get better results for a study like this one. Another limitation that we encountered was the fact that it was difficult to find schools which were willing to participate in the research, most of them argued that they did not have the time to answer our questionnaires or reveal that information. We strongly recommend for any future research the importance to have some kind of incentive for the teachers or the school community or for anyone who wants to participate to motivate them to participate; perhaps a good idea could be some kind of present in order to demonstrate gratefulness towards the educational community.

Finally, if we had more time and resources in our hands, we would have loved to add the vision of the students and their families, just to have a glimpse of the whole picture in every school.

5.3 PROFESSIONAL APPLICATION AND RECOMMENDATIONS

According to the results of this investigation, we recommend that teachers pay more attention to strengthening talents than highlighting weaknesses because the development of the talents could be a great contribution to our society. Also, to strengthen talented students motivates them to learn and it increases their self-esteem, as it was mentioned at the beginning of this work.

Throughout this research we can see that most of the teachers are aware of the importance of the talents that their students present. Our recommendations are mainly directed at the schools and especially to the Ministry of Education, which should include clear guidelines to work with these talents. It is important that the Ministry of Education recognizes that
to strengthen talents is essential to improve the quality of education, thereby our society.

We, as a society, spend lots of efforts developing Special Educational Needs. However, the work with talented students is not included within this Special Education Needs. We have been talking about flexible curriculums to satisfy the needs of these group of students, for around two decades. We can ask: what are the gifted students, but children with Special Educational Needs? The protocols we witnessed in all the schools we visited were not enough for their talents; therefore, we can conclude the current system does not serve their needs. All is done more with good intentions instead of actual strategies and a long-term planning. So, where are the flexible curriculums for these talented students? We have a long way to go. Maybe the new Einstein now is in a forgotten corner of our country.
REFERENCES


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ENTREVISTA CUALITATIVA
(UTP)

La siguiente encuesta está compuesta por 19 preguntas de desarrollo. Es importante que en sus respuestas sea honesto y refleje la realidad de su entorno educacional y sus prácticas pedagógicas. Se sugiere que las respuestas sean breves y claras.

1. ¿Qué entiende por talento académico y debilidad académica?
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

2. ¿Cómo se aborda la existencia de estos talentos y/o debilidades en los alumnos?
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

3. Si ahora nos vamos al colegio en general donde trabaja, ¿qué acciones ve ud. que realiza el colegio para identificar y potenciar estos talentos o debilidades en los estudiantes?
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

4. De acuerdo a la visión educativa del colegio ¿Qué importancia tiene el identificar los talentos y debilidades de los estudiantes dentro de la institución educativa/sala de clases?
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

5. De acuerdo a la visión educativa del colegio ¿Qué acciones se llevan a cabo en presencia de alumnos con algún talento y/o debilidad académica?
   ____________________________________________________________
   ____________________________________________________________
6. ¿Cómo se aborda el trabajo con alumnos con algún talento y/o debilidad?

7. En los equipos docentes ¿Existe una observación continua del comportamiento de posibles estudiantes talentosos?

8. ¿Los diferentes equipos docentes realizan un análisis de la producción escrita de posibles estudiantes talentosos o con debilidades?

9. ¿Los diferentes equipos docentes realizan un análisis de las composiciones orales de posibles estudiantes talentosos o con debilidades?

10. ¿Los diferentes equipos docentes realizan un análisis profundo de las expresiones artísticas de posibles estudiantes talentosos o con debilidades?

11. ¿Se ha realizado alguna entrevista con los padres del estudiante para abordar estos temas?
12. ¿Son del conocimiento del colegio los intereses y/o gustos del estudiante fuera del aula de clases?

13. ¿Se facilita el acceso a recursos adicionales y complementarios de información?

14. ¿Se fomenta el rol de liderazgo del estudiante que exhibe talentos en el aula?

15. ¿El colegio proporciona las oportunidades para que el estudiante comparta y desarrolle con otros sus intereses y habilidades?

16. El colegio, ¿Entrega la opción a los estudiantes para poder utilizar sus habilidades en la resolución de problemáticas y/o realizar investigaciones que van más allá de los programas ordinarios?
**Dentro del colegio,**
17. ¿Poseen programas adaptados, con ritmo más rápido o más lento de aprendizaje?
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________

18. ¿Poseen programas de reforzamiento para estudiantes que tienen dificultades en ciertas áreas académicas?
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________

19. ¿Genera una atmósfera de comprensión, respeto y aceptación de las diferencias individuales?
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________
INSTRUMENTO CUANTITATIVO
ENCUESTA (Profesores)

La siguiente encuesta está dividida en 5 partes las cuales están compuestas por preguntas de respuesta simple (sí o no), preguntas abiertas, de opción múltiple, con escala de likert y con escala numérica. Es importante que al responder sea honesto y refleje la realidad de su entorno educacional y sus prácticas pedagógicas.

A. Preguntas abiertas y de respuesta simple. Sí/No. Marque su respuesta haciendo una equis (X) en el recuadro y complete con sus palabras cuando sea necesario

A1. Como profesor, ¿Identifica a los alumnos que tienen debilidades en algún área específica?
Sí □   No □

A1.1. Si la respuesta anterior fue SI,
¿Cómo se da cuenta que los alumnos tienen debilidades?
_________________________________________________
_________________________________________________
_________________________________________________

A1.2. Si la respuesta fue No.
¿Por qué?
_________________________________________________
_________________________________________________
_________________________________________________

A2. Como profesor, ¿Identifica a los alumnos que tienen talentos especiales en algún área específica?
Sí □   No □

A2.1. Si la respuesta anterior fue SI,
¿Cómo se da cuenta que los alumnos tienen talentos especiales?
_________________________________________________
_________________________________________________
_________________________________________________

A2.2. Si la respuesta fue No.
¿Por qué?
_________________________________________________
_________________________________________________
_________________________________________________
A3 ¿Crean un plan especial para el o los alumnos(as) para desarrollar y/o potenciar estos talentos?
Sí □ No □
¿Cómo?
_____________________________________________________
_____________________________________________________

A4 ¿Crean un plan especial para el o los alumnos(as) para mejorar estas debilidades?
Sí □ No □
¿Cómo?
_____________________________________________________
_____________________________________________________

Las siguientes son preguntas de selección múltiple. Usted debe seleccionar solo tres, marcando una equis (X) en el recuadro. Si dentro de su selección está la opción otro, por favor escribir, al lado, cuál es ese otro u otros.

B 1 ¿Qué acciones realizan para potenciar estos talentos?

[ ] Se trabaja con los padres para crear un plan de desarrollo del alumno
[ ] Fomento de actividades especiales
[ ] Tareas especiales
[ ] Trato diferenciado del resto de los alumnos
[ ] Se le explica al alumno lo que se está buscando potenciar
[ ] No se busca generar un trabajo especial
[ ] Ninguna de las anteriores
[ ] Otro
_____________________________________________________

B 2 ¿Qué acciones realizan para potenciar estos mejorar esas debilidades?

[ ] Se trabaja con los padres para crear un plan de desarrollo del alumno
[ ] Fomento de actividades especiales
[ ] Tareas especiales
[ ] Trato diferenciado del resto de los alumnos
[ ] Se le explica al alumno lo que se está buscando potenciar
C 1 Según lo que ha detectado en los alumnos(as) con talentos especiales, ¿cuáles son sus principales necesidades?

- [ ] Trato especial
- [ ] Trabajos extras
- [ ] Actividades extraordinarias
- [ ] Otro

C 2 Según lo que ha detectado en los alumnos(as) con debilidades, ¿cuáles son sus principales necesidades?

- [ ] Trato especial
- [ ] Trabajos extras
- [ ] Actividades extraordinarias
- [ ] Otro

C 3 ¿Qué recursos o herramientas son las más habituales en el proceso de mejorar debilidades o fortalecer talentos dentro de la institución?

- [ ] Recurso 1 (Talleres de refuerzo durante las tardes para los alumnos que tienen malas notas)
- [ ] Recurso 2 (Recomendar estudiantes con talentos a participar en programas extracurriculares. Penta UC)
- [ ] Recurso 3 (Reunión con apoderados y búsqueda de tutor.)
- [ ] Recurso 4 (Entrevista con los alumnos para averiguar sobre su debilidad/talento)
- [ ] Recurso 5 (Proporcionar actividades extra dentro de la clase para mejorar o potenciar el rendimiento. propios del profesor)
- [ ] Otro

C 4 ¿Qué actividades son las más habituales en el proceso de mejorar debilidades o fortalecer talentos dentro de la institución?

- [ ] Actividad 1 (Olimpiadas.)
- [ ] Actividad 2 (Feria de ciencias.)
- [ ] Actividad 3 (Show de talentos.)
- [ ] Actividad 4 (Debates.)
- [ ] Actividad 5 (Actividades Lúdicas)
Seleccione, con una equis (X) en el recuadro, solo una de las alternativas, según su nivel de acuerdo o desacuerdo.

D1 Considero altamente importante identificar los talentos de los estudiantes de manera individual
[ ] Muy de acuerdo
[ ] De acuerdo
[ ] Indiferente
[ ] En desacuerdo
[ ] Muy en desacuerdo

D 1.1 Considero altamente importante identificar las debilidades de los estudiantes de manera individual
[ ] Muy de acuerdo
[ ] De acuerdo
[ ] Indiferente
[ ] En desacuerdo
[ ] Muy en desacuerdo

D 1.2 Considero importante realizar un trabajo adicional
[ ] Muy de acuerdo
[ ] De acuerdo
[ ] Indiferente
[ ] En desacuerdo
[ ] Muy en desacuerdo

D 1.3 Me considero especialista para tratar talentos especiales
[ ] Muy de acuerdo
[ ] De acuerdo
[ ] Indiferente
[ ] En desacuerdo
[ ] Muy en desacuerdo

D 1.4 Es correcto que no se exija por igual a todos los estudiantes dentro de la sala de clases
[ ] Muy de acuerdo
[ ] De acuerdo
[ ] Indiferente
[ ] En desacuerdo
[ ] Muy en desacuerdo
D 1.5 El colegio me apoya en potenciar este desarrollo de talentos especiales en cada alumno que se detecte.

   [ ] Muy de acuerdo
   [ ] De acuerdo
   [ ] Indiferente
   [ ] En desacuerdo
   [ ] Muy en desacuerdo

D 1.6 El colegio me entrega los recursos (tiempo, dinero, facilidades, etc) para potenciar estos talentos especiales

   [ ] Muy de acuerdo
   [ ] De acuerdo
   [ ] Indiferente
   [ ] En desacuerdo
   [ ] Muy en desacuerdo

D 1.7 El colegio me apoya en mejorar las debilidades en cada alumno que se detecte.

   [ ] Muy de acuerdo
   [ ] De acuerdo
   [ ] Indiferente
   [ ] En desacuerdo
   [ ] Muy en desacuerdo

D 1.8 El colegio me entrega los recursos (tiempo, dinero, facilidades, etc) para mejorar estas debilidades

   [ ] Muy de acuerdo
   [ ] De acuerdo
   [ ] Indiferente
   [ ] En desacuerdo
   [ ] Muy en desacuerdo
E 1. ¿Cuál es el promedio de alumnos que repiten por año?

1[ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] más[ ]

E 1.1 ¿Cuál es el promedio de los alumnos que son promovidos a avanzar un año más por su excelente rendimiento?

1[ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] más[ ]

E 1.2 ¿Considera que los resultados de la pregunta anterior, refleja parte de su trabajo al potenciar los talentos especiales con los alumnos?

Sí □ No □

D 1.3 ¿Por qué?

__________________________________________________________________________
__________________________________________________________________________

_________________________
Convalidación

Yo, Rocio Andrea Knipp Silva, licenciada en Lengua y Literatura Inglesa, diplomada en pedagogía para la educación superior y Master of Arts in English Linguistics and Literature, dejo constancia de la validación del instrumento(s) adjuntado(s) para la tesis Detection and strengthen of talents and weaknesses in Chilean Education, conducente a lograr el grado de Licenciado de la carrera de Pedagogía en Inglés para Educación Básica y Media.

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Constancia de validación

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