

Student experiences of an out of school  
academic enrichment programme for high  
ability students transitioning from DEIS  
primary schools to DEIS secondary  
schools

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# Declaration of Work

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# List of Abbreviations

<b>CAA</b>	Centre for Academic Achievement
<b>CAT</b>	Centre for Academic Talent
<b>CTY</b>	Centre for Talented Youth
<b>CTYI</b>	Centre for Talented Youth, Ireland
<b>CAO</b>	Central Admissions Office
<b>CAQDAS</b>	Computer Assisted Qualitative Data Analysis Software
<b>DCU</b>	Dublin City University
<b>DEIS</b>	Delivering Equality of Opportunity in Schools
<b>DES</b>	Department of Education & Skills
<b>DMGT</b>	Differential Model of Giftedness & Talent
<b>ESRI</b>	The Economic and Social Research Institute
<b>EUE</b>	Early University Entrants
<b>HEA</b>	Higher Education Authority
<b>HEAR</b>	Higher Education Access Route
<b>LEAP</b>	Lifelong Educational Achievement Partnership
<b>LET</b>	Living Educational Theory
<b>NAGC</b>	National Association for Gifted Children
<b>NCCA</b>	National Council for Curriculum & Assessment
<b>NDEA</b>	National Defense Education Act
<b>PSAT</b>	Preliminary SAT
<b>SCAT</b>	Schools and Colleges Abilities Test
<b>SMPY</b>	Study of Mathematically Precocious Youth
<b>SSP</b>	School Support Programme
<b>TBC</b>	The Brilliant Club
<b>TCD</b>	Trinity College, Dublin

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# Thesis Abstract

## **Student experiences of an out of school academic enrichment programme for high ability students transitioning from DEIS primary schools to DEIS secondary schools**

**Eamonn Carroll**

This study focuses on the creation and the first three cycles of the Lifelong Educational Achievement Partnership (LEAP) programme, designed to address a gap in provision for high ability students attending designated socioeconomically disadvantaged schools in the area surrounding Dublin City University (DCU). This dissertation documents the development of an action research project from the initial reflection on this gap in provision, through the planning of an appropriate intervention to the act of initiating the programme and the observation of its impact on students and on to further reflection, planning, action and observation across three years (July 2016- March 2019).

The LEAP programme offered students a sustained commitment through their transition from primary to secondary school. This took the form of four terms of academic enrichment classes on a variety of subjects from journalism to forensic science to mathematics. It also offered a bridge for students to transition into the Centre for Talented Youth, Ireland's (CTYI) secondary school programme, extending the commitment beyond the programme itself.

The research focussed on giving students, as well as their parents and teachers, a chance to articulate their experiences of the LEAP programme through questionnaires and group interviews. Through a constant comparative coding approach, three key themes were identified in these data. The first of these, Impact of Programme, outlined the perceived academic, social and personal benefits students took from the programme. The second, Love of Learning, explored the passion for learning voiced by students throughout their participation on the programme. The final theme, Programme Design, considered key elements of the structure of the programme and how they related to students' experiences of it.

Overall, the research conducted for this study presents a successful intervention for an underserved population, one which offers important new knowledge about providing for this cohort. More importantly, as an action it has successfully effected positive change within participants' lives.





# Chapter 1: Introduction

## 1.1 Introduction

This dissertation is the account of an action research project based on the Lifelong Educational Achievement Partnership (LEAP) programme which I designed, created and ran over three action research cycles. The LEAP programme is an out-of-school academic enrichment programme for high ability students attending socioeconomically disadvantaged schools in the area around Dublin City University (DCU). It began in July 2016 and, at time of writing (December 2019), is still running. This introductory chapter will begin by briefly explaining what the LEAP programme is, and why it was needed.

The research carried out in this study will then be outlined. Throughout this study I have occupied the role of the researcher-practitioner, using my research to improve my practice and my practice to ground my research. Research was therefore fundamental to the LEAP programme from the very beginning, guiding its design and shaping its development throughout its existence to date.

This chapter is an introduction, and so the accounts it will provide of the action and the research components of this study will be brief, capturing only the most crucial aspects. The rest of the dissertation will provide a thorough exploration of the whole project, and the introduction will end with a synopsis of each chapter.

## 1.2 The LEAP Programme

The LEAP programme is an out-of-school academic enrichment programme for high ability students attending designated socioeconomically disadvantaged schools as they make the transition from primary to secondary school. The rest of this section will break

down what each of these qualifiers mean and show why the programme was shaped as it was.

### 1.2.1 “Out-of-School”

Firstly, the LEAP programme took place outside of students’ schools. Chiefly, it had to be an out-of-school programme because there is little appetite or infrastructure within the Irish education system to provide a programme of this kind within schools (O’Reilly, 2015). Currently, there is no standardised provision for high ability students available in the Irish education system at all. This places the burden on individual teachers to differentiate in the classroom without adequate support (Cross et al., 2014) or on students’ families to seek out alternative educational opportunities. This is despite the fact that the Education Act of 1998 established the statutory right of “exceptionally able” students to “a level and quality of education appropriate to meeting the needs and ability of that person” (Education Act, 1998). This lack of provision is central to the experiences of high ability students in Ireland, and will be further explored in section 3.3.

The LEAP programme was instead run by the Centre for Talented Youth, Ireland (CTYI) on the campus of DCU. CTYI is an organisation within DCU dedicated to providing educational opportunities for high ability students. Arguably as a result of the lack of provision for high ability students within schools, CTYI has twenty-five years of experience in running academic enrichment programmes. CTYI’s mission statement captures the essence of their approach to provision and their commitment to students:

“CTY Ireland aims to allow all talented students to reach their potential both academically and socially by providing relevant and interesting challenges based on ability and interest rather than age.” (CTYI 2019)

CTYI now runs courses for high ability students in primary school (aged 6-13) in third level institutions across Ireland and for students in secondary school (aged 13-17) in DCU. It thus offered unparalleled logistical, technical and moral support in the design and implementation of the LEAP programme.

Furthermore, a university campus is widely recognised as an ideal location for academic enrichment programmes within the field of high ability education (See for example Olszewski-Kubilius et al., 2017; VanTassel-Baska, 2007; Brody, 2009). The university atmosphere adds immensely to participants' experience of the programme, especially for students without a family experience of third-level education.

### 1.2.2 “Academic Enrichment Programme”

Much like the location of the programme, the nature of the programme was determined by the context in which it operated and the wider literature from the field of high ability studies. Programmes for high ability students generally take the form of acceleration programmes or enrichment programmes- condensing school curricula to cover them more quickly or covering a greater breadth or depth of material than the school curriculum respectively. In order to be effective, acceleration must be tied into students' whole education (Colangelo, Assouline & Gross, 2004). Within the Irish system, which is ambivalent towards provision for high ability students at the best of times, acceleration was simply not a feasible option.

Enrichment, on the other hand, can complement students' school education without being explicitly tied into it. Within the LEAP programme, students took courses in subjects like journalism, forensic science and medicine, subjects which are outside of the school curriculum. The aim of these courses was to give students a chance to engage with challenging but interesting material which they would not otherwise experience.

### 1.2.3 “High Ability Students”

What does it mean to target a programme at high ability students? The definition of “high ability” is a contentious and unsettled issue within the field of high ability education. Indeed, debate still rages over whether “high ability” is what we should be looking to define at all, with the terms “gifted”, “exceptionally able”, “talented” and “high learning potential” also used within the literature. The question of what programmes for high ability students should aim to do is likewise a contentious issue. One shared feature across all such programmes is the idea that they should challenge students, a goal generally linked to

the lack of academic challenge high ability students experience in mainstream education. The benefits of this challenge, and by implication the fundamental motivation behind the programmes, are framed in a number of different ways within the literature, often linked to different methods of identifying students to participate. These approaches will be explored in detail in section 2.2.

Within this study, students were nominated by their primary school teachers to take part in the LEAP programme based on their ability and interest in school, as well as their enthusiasm towards taking part in an academic programme outside of school hours. This is a much less rigid identification process than is standard across the field, which generally require students take part in a formal assessment to qualify. Once on the LEAP programme, students participated in such a formal assessment, the Talent Search. The Talent Search is based on the CTY model (Brody & Stanley, 2005) of identifying high ability students who are ahead of their age level in verbal or numerical ability and providing them with appropriate educational opportunities. Participation in the Talent Search qualified students for a CTYI secondary school summer programme after they completed the LEAP programme. It also provided some interesting insights into the two different approaches to identification. There are certainly valid criticisms of adopting a looser identification process (which will be addressed in 2.6), but ultimately I believe it is justified by the population the LEAP programme is serving- high ability students attending designated socioeconomically disadvantaged schools, as will be discussed in section 3.2.

#### 1.2.4 “Attending DEIS Schools”

Delivering Equality of Opportunity in Schools (DEIS) is the Department of Education and Skill’s (DES) scheme to tackle educational disadvantage across Ireland. Under the scheme, schools identified as serving populations facing concentrated educational disadvantage are eligible for extra resources and support (DES, 2016). This identification is based on the Pobal Deprivation Index (Pobal, 2019), which uses socioeconomic census data to assign a deprivation score to Small Areas, “standardised areas of population comprising a minimum of 50 dwellings, a maximum of 200 dwellings and a mean of just under 100 dwellings.” (DES,2016) Areas’ scores on the deprivation index are strongly correlated with educational attainment, a reflection of the profound impact socioeconomic disadvantage has on students’ school experience and eventual academic outcomes.

DEIS schools exist all over Ireland, but participants on the LEAP programme were drawn only from the area immediately surrounding DCU. These schools are linked to the DCU Access service (DCU Access, 2019), a body within DCU set up to tackle the under-representation of particular socioeconomic and cultural groups within the university. As a result of this link, the infrastructure and relationships with these schools needed to get the programme off the ground were largely already in place. The reason for this link, and for this study's focus on these schools is their location across North County Dublin, perhaps the area with the most concentrated socioeconomic disadvantage in Ireland (Pobal, 2019). This vital background to the study will be explored in section 3.4, but it is important to note here that students were not asked for details about their individual socioeconomic circumstances. Instead, teachers were asked to put forward only students from the target Access group: students with little or no tradition of educational attainment in the family, students from groups underrepresented at third level or students with a low family income.

While the DEIS programme has had a positive and significant impact on participating schools, as will be discussed in section 2.3, it has not focussed on highly able students within those schools, leaving them at risk of not fulfilling their potential due to lack of stimulation. The LEAP programme was therefore conceived of as a way to provide these students with the challenge they needed to keep growing as learners, as well as giving them experiences which would inspire and sustain a passion for education.

Even as initiatives for socioeconomically disadvantaged students often provide little for high ability students, interventions for high ability students often exclude socioeconomically disadvantaged students. A common charge laid against programmes for high ability students is that they are elitist, a charge embraced and celebrated by much of the early scholarship in the field (Borland, 2005). Rhetoric and practice in the field in the 21<sup>st</sup> century are much more sensitive to the issues of equality and justice in access, with many arguing that the fundamental goal of targeted provision for high ability students is to give these students educational opportunities appropriate to their needs. Alongside this has come heightened reflection on the current make up of such programmes, which tend to be disproportionately attended by students from more affluent backgrounds and from dominant ethnic and cultural groups.

While much of the literature in the field comes from the US, the representation of students from socioeconomically disadvantaged backgrounds is an issue in CTYI as well (O'Reilly,

2005). As CTYI receives no state funding, these programmes are funded by course fees, placing them beyond the reach of many students with the ability and the interest but without the economic means to attend. Over the last fifteen years, CTYI has made a serious and concerted effort to overcome this and ensure that “all talented students” are indeed able to access the educational opportunities they need.

The LEAP programme is a significant step in this direction, building on previous efforts to offer more opportunities to more students. As well as a financial aid scheme to help parents meet the cost of the mainstream courses, CTYI has established two programmes specifically for students attending DEIS schools linked to the DCU Access service. The first of these, the Centre for Academic Achievement (CAA), described in Healion (2013), is a standalone academic enrichment programme for primary school students. The second, the Aiming High scheme, described in Breslin (2016), offers scholarships to secondary school students to attend the mainstream CTYI summer programmes. Both of these programmes were successful in expanding access to students who would not otherwise have attended, and the studies into each showed the positive impact the programmes had on participating students.

Building on this work, the LEAP programmes offers a more intense and sustained commitment to participating students, and it does so at a pivotal stage in their development- the transition from primary to secondary school.

### 1.2.5 “The Transition From Primary to Secondary School”

The transition from primary to secondary school is a challenging time for all students, but the literature suggests that it is especially so for students from the highest academic quintile and students from the lowest economic quartile (Smyth, McCoy & Darmody, 2004). Of course, students at the intersection of these two groups are the target group for the LEAP programme. Carr (2008, p. 3) argues that the “primary to post-primary transition is a particularly crucial time for young people from disadvantaged communities when learners can drop out or be made for life.” One of the biggest problems facing high ability students is stagnation, as much of 1<sup>st</sup> year is spent ensuring everybody knows the fundamentals rather than covering new material (Smyth, 2015). The increased pressure of having more homework and more frequent tests can also reduce students’ positive

sentiments towards education in general (INTO, 2008). An academic enrichment programme based on challenging, novel material offers students a more stimulating and inspiring vision of education at a time when such a vision is truly needed.

The LEAP programme also functions as a transition for students between the CAA primary school programme and the Aiming High secondary school programme. Many students on the LEAP programme previously attended CAA courses, some of them each year from 4<sup>th</sup> to 6<sup>th</sup> class. All students who took part in the LEAP programme were eligible to attend CTYI secondary school programmes at the Aiming High scholarship rates. Together, the three programmes offer a powerful long-term commitment to students, honoring CTYI's dedication to helping students "reach their potential both academically and socially" (CTYI, 2019).

### 1.3 Programme Outline

Having established what the LEAP programme is in the sense of what it aims to provide and the ethos driving it, it is worth looking at what it is in a more day-to-day sense. Over the three cycles of the programme which ran during this study, the structure has evolved based on feedback from participants and my own improving practice, and so the structure of each cycle will be laid out below.

#### Cycle 1: 2016-2017

July Term: One week course which ran from Monday 4<sup>th</sup> July to Friday 9<sup>th</sup> July. Students had a choice between a "World of Words" course and a "Maths Magic" course.

Autumn Term: Two workshops preparing students for secondary school and for the CTYI Talent Search assessment.

Saturday 17<sup>th</sup> September: Game-Based Learning

Saturday 15<sup>th</sup> October: Personality & Abilities Discovery Day

Saturday 19<sup>th</sup> November: Talent Search Assessment

Spring Term: Stop the Press! Six week course on journalism which ran on Saturday afternoons from 28<sup>th</sup> January to 11<sup>th</sup> March.

## Cycle 2: 2017 -2018

Spring 2017 Term: Six week course which ran from on Saturday afternoons from 28<sup>th</sup> January to 11<sup>th</sup> March.

Students had a choice between a Director's Cut (filmmaking) course and a Forensic Science course.

July Term: One week course which ran from Monday 10<sup>th</sup> July to Friday 14<sup>th</sup> July.

Students had a choice between an Experimental Science course, a World of Words course and a Maths Magic course.

Autumn Term: Six week course which ran on Saturday afternoons from 30<sup>th</sup> September to 25<sup>th</sup> November.

Students had a choice between a Crime & Punishment course, an Exploring Engineering course and a Medicine course.

During the six weeks, students received some preparation material for the Talent Search assessment and sat the assessment.

Spring 2018 Term: Six week course which ran on Saturday afternoons from 3<sup>rd</sup> February to 10<sup>th</sup> March.

Students had a choice between a Stop the Press! course and a Science of Tomorrow course.

## Cycle 3: 2018-2019

Spring 2018 Term: Six week course which ran on Saturday afternoons from 3<sup>rd</sup> February to 10<sup>th</sup> March.

Students had a choice between a Director's Cut course and a Forensic Science course.

July Term: July Term: One week course which ran from Monday 9<sup>th</sup> July to Friday 13<sup>th</sup> July.



Each day was split evenly between a World of Words course and a Maths Magic course.

Autumn Term: Six week course which ran on Saturday afternoons from 29<sup>th</sup> September to 24<sup>th</sup> November.

Students had a choice between a Crime & Punishment course, and an Exploring Engineering course.

During the six weeks, students received some preparation material for the Talent Search assessment and sat the assessment.

Spring 2019 Term: Eight week course which ran on Saturday afternoons from 2<sup>nd</sup> February to 6<sup>th</sup> April.

Students had a choice between an Environmental Science course, a Model UN course and an Imaginative Storytelling course.

Figure 1.1 below summarises this structure in graphical form.



Figure 1.1 LEAP Programme Structure, 2016-2019.

## 1.4 Research Approach

This project took a critical participatory action research approach to the gap in provision for high ability students from disadvantaged backgrounds discussed above. This meant acting collaboratively with other stakeholders to address the gap through establishing the LEAP programme, but doing so within a reflective framework so as to generate new knowledge in the process. The new knowledge to be generated was structured by the research questions underpinning the project. The fundamental question on which this study was built was the question of how high ability students from designated socioeconomically disadvantaged schools perceive their experience of the LEAP programme. Within this question, a number of sub-questions focussed the research further:

- ❖ Do students feel that they benefit from taking part in the course?
- ❖ How do they perceive and describe these benefits?
- ❖ Do other significant figures (teachers and parents) in the student's life feel they benefit from taking part in the course?
- ❖ How do they perceive and describe these benefits?
- ❖ Are there elements of the LEAP programme which participants find particularly beneficial?
- ❖ Are there elements they find unnecessary or counter-productive?
- ❖ How do participants perceive their experience of the transition into the CTYI secondary school programme and their experience of the Talent Search assessment?

The emphasis within the research was on student experiences, both because understanding these experiences was seen as key to improving the LEAP programme and because giving students a chance to articulate these experiences in their own words and taking their words seriously is essential to a participatory approach to research. The data collection therefore focussed predominantly on questionnaires completed by students and group interviews conducted with them. The perspectives of other important figures in students' lives were also incorporated- group interviews were conducted with parents and questionnaires were completed by students' primary and secondary school teachers.

Taken together, these perspectives paint a rich and nuanced picture of student experiences of the LEAP programme. Constant comparative coding was used to analyse the data,

extracting three key themes based on the research questions: Impact of Programme, Love of Learning and Programme Design.

The Impact of Programme and Programme Design themes were largely *a priori* constructions- evaluating the impact of the programme on students and the strengths and weakness of various features of the programme were seen as crucial from the start. The Love of Learning theme, on the other hand, was created to capture all of the ways in which students spoke about learning (on and off the LEAP programme) as their positive feelings towards learning clearly impacted their engagement with the programme. I therefore saw understanding how and why they articulated these feelings as crucial to understanding their experiences of the LEAP programme.

## 1.5 Significance

The significance of this study is encapsulated by the findings of these three themes. The first, Impact of Programme, suggests that the programme has had a real and positive impact on students' lives. Students, their parents and their teachers perceived a range of academic, social and personal benefits to students over the course of their participation on the programme.

The second theme, Love of Learning, shows the depth of the passion for learning students brought to the LEAP programme as well as the success of the programme in nurturing and refining this passion. For many students, this passion spans their experiences in both primary and secondary school as well as their aspirations to continue to third level. Maintaining students' love of learning throughout secondary school is therefore crucial, and I believe that their experiences on the LEAP programme and on into the CTYI secondary school programmes have had a positive impact in that regard.

The final theme, Programme Design, explores the impact of the structure of the programme on participants. Some aspects of this structure, most notably the quality of instructors and the location of the programme on a university campus, are common within the field. In some aspects the LEAP programme is notably different to much of the field, as in the approach to identification, the use of action research and the extent of students' engagement with the programme.

I believe that this action research project has made an original contribution to the academic literature on provision for high ability students from socioeconomically disadvantaged backgrounds. The LEAP programme is the first such programme situated at the transition from primary to secondary school, as well as one of the first action research projects in the field (previous examples include Healion, 2013). This study shows that such an approach can generate useful knowledge about student experiences which would not be captured by a quantitative methodology, especially in relation to what they value in a programme and why. This is particularly important knowledge due to the difficulties the field of high ability studies has had in providing for students from socioeconomically disadvantaged backgrounds.

## 1.6 Thesis Synopsis

This thesis comprises seven chapters, a brief synopsis of each of which will be provided in this section.

### 1.6.1 Introduction

The Introduction aims to provide an overview of the whole of this action research project, comprehensive in scope rather than in detail. It begins by explaining what the LEAP programme is, firstly by breaking down what it means to be an out of school academic enrichment programme for high ability students attending socioeconomically disadvantaged school, and then by outlining the actual structure of the programme over the three cycles described in this study. The research carried out into this programme is then summarised- beginning with the research questions and then considering the underlying philosophy and the research methods used. The significance of this project is considered in terms of the research findings and the success of the action in effecting change in the world. Finally, the ways in which each of these elements of the study will be drawn out over the course of this thesis are outlined in a synopsis of each of its seven chapters.

### 1.6.2 Literature Review

This chapter will review the literature relevant to this study. It will begin by looking at the field of high ability studies through the frame of four influential models of high ability- domain general models, domain specific models, developmental models and finally

systemic models. Ziegler's (2005) Actiotope model, a systemic model of high ability, will be explored in particular detail as it is the model underpinning this study.

The literature on educational disadvantage will then be considered, beginning with attempts to theorise it and then moving on to more practical definitions and finally to the effects of educational disadvantage in an Irish context. Once working definitions of high ability and of disadvantage have been outlined, the literature on high ability students from disadvantaged backgrounds will be explored. There are multiple examples of successful programmes for this cohort from the US and UK in the literature, and four of these will be examined in detail.

Finally, literature around the transition from primary to secondary school will be discussed. The particular challenges faced by the cohort at the centre of this study will be outlined, with particular attention paid to the research on academic challenge (or the lack thereof) in the first year of secondary school.

### 1.6.3 Context

The LEAP Programme was the central context for this research, and it in turn was profoundly shaped by the context within which it was designed and implemented. The Context chapter will therefore open with a description of the LEAP programme itself, outlining in detail the structure of the programme and explaining why particular decisions were made. With this established, three vital aspects of the context within which the programme existed will be explored. Firstly, the national Irish education system will be discussed through the lens of its provision for high ability students. Secondly, the importance of the programme's location within north Dublin will be illustrated by an exploration of the socioeconomic deprivation facing the area. Finally, the institutional context of CTYI itself will be described, with particular reference to the body of research carried out within CTYI over the last decade and to the two existing programmes for high ability students from local DEIS schools, the CAA programme and the Aiming High scheme.

## 1.6.4 Research Design

The Research Design chapter will outline the entire development of this study, beginning with the research questions underpinning it. Following Creswell & Creswell's (2018) research design framework, the "selected strategies of inquiry", "philosophical worldview" and "research methods" will be laid out, and the "fit" between each of these three vital elements will be illustrated. The choice of action research as the "selected strategy of inquiry" will be explained by the potential it offers to effect meaningful change in the world and create new knowledge through reflective practice and a collaborative ethos. The role of social constructionism and critical theory in the "philosophical worldview" at the heart of the study will be elaborated upon. The "philosophical worldview" is also influenced, if less explicitly, by the researcher as a person rather than an academic, and so the role of my own experiences and values on the research will also be discussed.

The "research methods" themselves will then be outlined in full, beginning with the collection of data through student questionnaires and group interviews, parent group interviews and school teacher questionnaires and then moving on to the analysis of this rich qualitative data through constant comparative coding. The evaluation of the findings of this analysis using Creswell & Poth's (2018) and Lincoln & Guba's (1985) frameworks will then be explored.

Finally, the chapter will cover the crucial issues of the dissemination of this research and the ethical considerations taken throughout this study to ensure the safety and wellbeing of all participants.

## 1.6.5 Findings

Three key themes from the data will be presented in the Findings chapter, relating to the impact of the programme on students, students' love of learning and the structure of the programme. The first of these, the Impact of Programme theme, shows that students and their parents and teachers perceived academic, social and personal benefits as a result of participating in the LEAP programme. The second, Love of Learning, highlights the passion for learning students brought to the LEAP programme and how this was strengthened and refined by their experiences on the programme. The last theme,

Programme Design, examines the strengths and weaknesses of the LEAP programme, especially those related to the key areas of the transition from primary to secondary school and the long-term engagement offered by the programme.

### 1.6.6 Discussion

The Discussion chapter considers the themes outlined in the Findings chapter in relation to the wider literature in order to synthesise the new knowledge created by this study. Perhaps the most important are the concrete change this study has effected in students' lives, the implications of the LEAP programme for identifying students to take part in academic enrichment programmes and the benefits and drawbacks of situating the LEAP programme at the transition from primary to secondary school.

### 1.6.7 Conclusion

The Conclusion chapter reflects on the study as a whole, summarising the significance of the project both as research and as action. The limitations of the study are then discussed, leading into recommendations for future practice and proposed directions for future research.

## 1.7 Conclusion

The core features of this study have all been introduced in this chapter, which presents an extremely concise account of the entire project. The chapters which follow will present a much less concise account of the project, taking the time to grapple with the detail and nuance which this introduction could not consider. The next chapter will explore the key ideas of "high ability", "disadvantage" and "transition" only touched upon so far. Each of these terms, especially the first two, are the subject of a substantial and complex body of academic literature, and so it is to this literature that we must turn.

# Chapter 2: Literature Review

## 2.1 Introduction

The LEAP programme is an intervention for high ability students attending designated socioeconomically disadvantaged schools, which takes place as they transition from primary to secondary school. This study, therefore, grappled with three areas of the literature. Firstly, there are the questions of who high ability students are and what they need from targeted programmes. Secondly, there is the question of what it means for students to be from socioeconomically disadvantaged backgrounds, both in terms of what this looks like in students' lives and how it should shape our provision for them. Finally, the transition from primary to secondary school is a key moment in students' lives, and one which has been explored in terms of academic, social and personal development. While these are three distinct areas of the literature in some senses, there is also crossover between them. Provision for students from disadvantaged backgrounds has been a central issue in the field of high ability studies for decades, and there are a number of effective programmes described in the literature. The experience of the transition for high ability students and for students from socioeconomically disadvantaged backgrounds has been marked out as an area with the potential to place students on a productive trajectory or derail their academic development. This chapter will explore the literatures on high ability, educational disadvantage and the transition in turn, but it will do so with an eye on both the links and the gaps between them. The review will show why this programme was necessary and why it took the form it did on a general level, while the specific local context which shaped it will be explored in the next chapter.

## 2.2 What is “High Ability”?

This study is being conducted within the field commonly referred to as gifted education, the central subjects of which are “gifted” students. The US National Association for Gifted Children (NAGC), offers a broad definition of such students for a general audience:

“Children are gifted when their ability is significantly above the norm for their age. Giftedness may manifest in one or more domains such as; intellectual, creative, artistic, leadership, or in a specific academic field such as language arts, mathematics or science.” (NAGC, 2019, n.p.)



Regarding the term gifted as overdetermined and counterproductive, in this study I will follow the lead of researchers like Borland (2005) within the field and eschew the label of gifted. Borland's proposal of "gifted" education without "gifted" children rests on the idea that

"the concept of the gifted child is logically, pragmatically and- with respect to the consequences of its application in American education- morally untenable, and the aims of gifted education would have a greater likelihood of being realized if we were to dispense with it altogether" (Borland 2005, p. 1).

The focus of this study is, rather, on high ability students, a distinction which is more than simply semantic and which will be elaborated upon over the course of this chapter. First, though, this section will examine four of the most prominent models of high and exceptional ability and the wider traditions on which they draw: Lewis Terman's (1925) "original" model of domain general "genius", Julian Stanley's (1973) domain specific Talent Search Model, Rena Subotnik, Paula Oszewski-Kubilius and Frank C Worrell's (2011) Talent Development model and Albert Ziegler's (2005) Actiotope model. Each model will be considered along three axes: focus (what is giftedness/ high ability?), identification (how do we find it?) and intervention (what do we do then?).

Locating this study's outlook within the tradition of gifted education and within recent debates over what "ability" is in an educational context, how we identify "high" ability in individual students and why we need to do so is crucial to explaining why the project exists at all and how it has been constructed. All models provide a definition of what ability itself is and each has its own techniques for identifying high ability students and providing for their needs. Each will be evaluated with a particular eye on how they relate to socioeconomically disadvantaged students, but the bulk of the literature addressing this specific population will be considered in section 2.4.

### 2.2.1 Lewis Terman & Domain General Theories

Beginning with Francis Galton's (1869) *Hereditary Genius*, the first studies of exceptional ability did not shy away from words like "genius" and "gifted", instead elaborating the special qualities of these special people with something approaching reverence. With the emergence of the earliest psychometric tests in the 1910s (Cross, 2015), the study of those who performed best in these supposedly precise and objective measures of intelligence soon took off in earnest. For decades, Terman's longitudinal studies remained the gold

standard in research into the “gifted”, gaining him the epithet of the “father of gifted education”. Terman identified these gifted students as the top 1% “in general intellectual ability, as measured by the Stanford-Binet Intelligence Scale or comparable instrument.” (Terman, 1925, p.43). The “Termites”, as the participants were affectionately known, were generally found to lead happy, healthy and successful lives, though there was a high level of variance on each of these measures within the group (Leslie, 2000). With the benefit of hindsight we can also see very clearly the areas where Terman’s study was most lacking, in some instances due to the narrowness of his construct of giftedness and in others due to his failure to recognise the sociocultural factors at play in his project. Terman’s (1925) study, titled the Genetic Studies of Genius, argued that “genius” was something that could be measured by performance in a psychometric measure, something that was stable within an individual over their lifetime and something that was largely the result of genetic rather than environmental factors, three interrelated questions which remain contested areas today.

Debate still rages over whether Terman’s group, largely consisting of upper-middle class Caucasian males, actually did better than the general population of their socioeconomic peers (Gladwell, 2008, p. 90), mirroring modern studies comparing individual, ability based factors with social and economic ones in shaping children’s lives (Tienken et al., 2017). A later study found that there was not a statistically significant IQ difference between a group of one hundred of the most successful and a group of hundred of the least successful Termites judged by academic success and professional prestige (Oden 1968), problematising Terman’s use of IQ as the sole identification method. Indeed, two of the students who were tested and failed to qualify for the programme went on to win Nobel Prizes in Physics, while none of the “Termites” would go on to win a Nobel Prize (Leslie, 2000).

Perhaps the best way to frame criticism of Terman’s study is through contrast with the work of Dr. Leta Stetter Hollingworth (1926). Working contemporaneously with Terman, but rather less widely known today, Hollingworth is sometimes referred to as the mother of gifted education, but more often not referred to at all. Cross’ (2015) survey of gifted education in the US and Subotnik et al.’s (2011) review of the field, for example, do not mention Hollingworth. She too worked with a group of students identified by their high score on the Stanford-Binet Intelligence Scales, but she blended her qualitative and quantitative psychological and educational research into who these students were and what they needed with a sociological analysis of the social, cultural and economic world which

had produced them (Benjamin, 1975). An area where she was particularly strident was in the relationship between gender and ability, or more accurately biological sex and ability. At a time when genius was conceived of as a masculine trait even among (perhaps especially among) the scientific elite (Hollingworth, 1914), she insisted

“It is desirable, for both the enrichment of society and the peace of individuals, that women may find a way to vary from their mode as men do, and yet procreate. Such a course is at present hindered by individual prejudice, poverty, and the enactment of legal measures. But public expectation will slowly change, as the conditions that generated that expectation have already changed, and in another century the solution to this problem will have been found.” (Hollingworth 1914, p. 529)

While much has changed in the century since this article was published, a solution to this problem remains very much unfound. Boys remain disproportionately more likely to be noticed for their high ability (Freeman, 2000), and myths like that of greater intellectual variability among men than women remain influential (Reis, 2005). Hollingworth’s insistence upon the role of the child’s environment in the manifestation of exceptional ability extended far beyond gender to include minority and socioeconomically disadvantaged students and other marginalised groups (White, 2014; Shields, 1991; Hollingworth, 1926). That her argument for this contingent conception of ability was based on very similar data to that which Terman used to support an unproblematic meritocracy underpinned by eugenics (Warne, 2019) are an excellent illustration of the interplay between scientific data and subjective or political perspectives which has always characterised the field.

The scientific grounding of Terman and Hollingworth’s identification techniques has been refined substantially since the 1920s, though much of the core remains. While popular conceptions of intelligence as a general trait of individuals date back centuries, the first scientific description of this general or global intelligence was Charles Spearman’s *g* factor, a measure of the correlation of an individual’s scores across different cognitive testing measurements (Spearman, 1904). This correlation is always positive and often strong, usually accounting for 40 to 50 percent of the between-person variance on cognitive tasks (Spearman, 1904). Modern IQ test scores are composite measures of this correlation from across a range of subtests, and have been shown to be positively correlated with a range of beneficial life outcomes, from academic success (Kuncel & Hezlett, 2010) and career progression (Ones, Viswesvarab & Dilchert, 2005) to health and

longevity (Gottfredson & Deary, 2004). IQ (like most other measures of general intelligence) is a standardised measure with a normal distribution curve, meaning that an individual's score is only meaningful in comparison with other individuals. These measures thus lend themselves to identifying the most able through simple calculation, with the top x% easily found on the curve. Deciding on which value is most appropriate for x, on how wide a net one wishes to cast, is a less straightforward affair, with various institutions setting the cut-off at the top one percent (Terman, 1925), two percent (MENSA) , five percent (Assouline & Lupkowski-Shoplik, 2012) and ten percent (Gagné 2005), among other values. Some authors even recommend the use of different values to graduate different levels of high ability within a programme and target provision accordingly (Gagné 2004). The sole use of general intelligence measures, unfortunately, often translates into confusion over what sort of intervention, if any, should be offered to those who are identified as having high (enough) ability.

Generally, the arguments for providing special programmes for high ability students within the domain general model fall into two main camps. Firstly, there are those that take the student-centric perspective, articulating the goals of the programme broadly in terms of the student's academic attainment and emotional wellbeing. As the US's 1972 Marland report, the first national report on gifted education and a significant milestone in the development of provision for high ability students, puts it,

“Gifted and Talented children are, in fact, deprived and can suffer psychological damage and permanent impairment of their abilities to function well which is equal to or greater than the similar deprivation suffered by any other population with special needs served by the Office of Education.” (Marland, 1972, pp. xi-xii)

These arguments focus on the mismatch between the child's ability level and the pace and challenge of the mainstream educational system, and specifically on the negative effects this mismatch can have on the student over the course of their time within the education system. These effects range from emotional issues like debilitating perfectionism or the dispiriting and alienating impact of daily boredom and frustration in the classroom to social issues like difficulties in finding other students with similar interests and outlooks to academic issues like loss of motivation or the non-development of the metacognitive skills to overcome challenges and failures (Robertson, Reis, Neihart & Moon, 2002).

The second lens through which many arguments in favour of provision for high ability students are framed is a social one, zoomed out to the level of the community or even

nation as a whole. These arguments focus on the potential of high ability students as something akin to a natural resource, one which must be carefully developed by the state to ensure maximum return. The clearest illustration of this approach was the US's 1958 National Defense Education Act (NDEA), the largest ever investment in highly able students, which granted "unprecedented funding to improve educational provisions for the United States' most able students and intended to supply a steady stream of innovators and knowledge workers in mathematics and science." (Jolly & Robins, 2016, p. 136) The goal was not abstract student wellbeing but concrete performance improvements, directed towards re-establishing American supremacy over the USSR in the 'Space Race' and the increasingly technological arms race (Jolly 2009). More recently, this perspective has developed into the idea of "cognitive capital", or even cognitive capitalism (Coyle, Rinderman and Hancock, 2016; Sever 2011), and holds that investment in high ability students will pay dividends in their increased creative and productive output in later life.

While these two approaches often feature side by side in the rationale for specific programmes for high ability students, there can be a tension between them, especially when using a domain general model for identification. As we shall see when looking at the critiques of the domain general model implicit or explicit in other models, those students who most need interventions within the school system are often not the same students who are most "worth investing in" (Subotnik et al., 2011). Exploring the roots of this disparity sheds light on many of the shortcomings of the domain general model.

The single *g* factor underpinning early IQ tests has been substantially expanded over the last century; the current most prominent model, the Cattell-Horn-Carroll model (CHC) has placed *g* at the apex of a pyramid (the general stratum), supported by two layers of more specific submeasures- the broad abilities stratum in the middle (comprising [at present] ten separate components including fluid and crystallised intelligence) and the narrow abilities stratum at the base (made up of over sixty separate abilities) (Carroll, 1997; McGrew, 2005). Reflecting the uncertainty still surrounding the construct of intelligence, the CHC model remains "an open-ended empirical theory to which future tests of as yet unmeasured or unknown abilities could possibly [add] additional factors" (Jenson, 2004, p. 5). Overall, while the CHC model is the best tool currently available to describe and approximate the construct of intelligence, its explanatory power on general outcomes remains statistically significant but small in effect size (Ericsson, Krampe & Tesch-Römer, 1993). Domain general ability may be understood as a reliable and valid measurement in a person's life,

particularly for their educational trajectory, but it is far from the only factor worth considering.

More importantly for this study, general ability models of giftedness are problematic in their implications for socioeconomically disadvantaged students and other under-represented groups. Average IQ has been found to differ between different racial groups (Roth et al, 2001), socioeconomic classes (Hanscombe et al., 2012) and nationalities (Wicherts et al., 2010), with furious debate as to the cause of these observed differences (Neisser et al., 1996). Murray and Herrnstein's (1994) controversial but influential polemic *The Bell Curve* argues that these differences are biological in nature and therefore immutable in effect, raising huge controversy- though many of their arguments are substantively the same as those put forward by more mainstream scientists, if less carefully and more sensationally stated (Neisser et al., 1996). In the context of this study's focus on a group traditionally underrepresented in gifted programmes, the biological argument would suggest that the problem is largely with the group rather than with the programmes or the socioeconomic setting more generally, and that it reflects a natural order rather than material conditions. As with the divergence between Terman and Hollingworth discussed above, the same data can yield wildly different interpretations depending on the lens through which one analyses it. The genetic and innate portion, or heritability, of intelligence remains an unanswered and perhaps unanswerable question- while many in the field of gifted education cite figures between 40% and 80% heritability (Simonton, 2013; Gagné 2013; Gagné 2011; Terman, 1925), there are geneticists who caution against the very idea of using heritability studies to explain human behaviours due to the complexity of disentangling the contribution of genetic factors, environmental factors and epigenetic, or gene-environment interaction, factors to human behaviour and life outcomes (See Downes, 2017, for a survey of this literature).

This study is not going to wade into the quicksand of currently unsolvable disputes over the relative shaping effects of nature and nurture, except insofar as it holds that a child's environment has a powerful effect on their life outcomes, and that this effect is especially pronounced for children in extreme environments (Turkheimer et al. 2003). The detrimental effects of being raised in poverty have been documented across several different areas, from the so-called word gap (Hart & Risley, 2003) to observable differences in brain structure (Hair, Hanson & Wolfe, 2015) to a range of social pressures and barriers largely avoided by the affluent (Evans & Kim, 2013). IQ measures are more malleable and less predictive among disadvantaged groups- one study found that individual

IQ scores varied with economic pressure among low-income Americans and Indian subsistence farmers (Mani et al., 2013).

General ability measures, therefore, leave a lot to be desired in the context of identifying high ability in socioeconomically disadvantaged students. Applying the assessments blind to students' backgrounds will lead (and indeed repeatedly has lead) to a disproportionately high presence of some groups of more socioeconomically and culturally advantaged students and a disproportionately low presence of students from more socioeconomically and culturally disadvantaged groups (Riedl-Cross & Dockery, 2014). The quantitative, empiricist logic underpinning general ability measures is not equipped to deal with this problem- this logic would hold that as long as general ability measures are accurately identifying those with the highest ability levels they are doing their job. The exact demographic makeup of the group identified is irrelevant. Even if one was to admit that environment was something which should be considered, there is no multiplier one can apply to correct for a lifetime of cumulative disadvantage, no mathematical formula for translating a student's background into a spot on the social bell curve. While general ability scores are measures of potential, they are measures of a potential already subject to the positive and negative influences of a student's life. For all that they are the closest thing we currently have to an objective and unbiased measure of ability, their fundamental idea of a "level playing field" is exploded by the inescapable ubiquity of these influences- students may all be sitting the same tests but they are not all entering it under the same conditions. The equal opportunity presented by standardised conditions within a day's assessment is dwarfed by the concrete inequalities of every other day of the child's life to date.

General ability approaches to high ability education therefore offer no clear solution to this problem. Short of radical social and economic change, the "excellence gap" in IQ and other measures seems unlikely to change any more in the near future than it has over the last four decades (Plucker, Burroughs & Song, 2010). On a positive note, the "Flynn effect" (Neisser, 1997), or longitudinal upward trajectory in IQ over the last century, has been attributed to social, economic and educational shifts (Rinderman, Becker & Coyle, 2017), showing that these influences *can* have a significant effect in the long term. More pessimistically, the continuing existence of the excellence gap throughout this period suggests that these influences are likely to preserve or even exacerbate existing class divisions absent a concerted focus on addressing them. While using general ability measures alone to identify students for special programming seems like a non-political,

empirically grounded and entirely just approach, the effect of such an approach has serious socio-political implications- over-identifying students from privileged backgrounds and advantaging them further, “mirror[ing], and perhaps perpetuat[ing], vicious inequities in our society” (Borland, 2005, p.12). Working exclusively within a quantitative domain-general framework shuts down most critiques of this issue- the problem is not technical or methodological but sociopolitical and moral. As will be outlined in the research design section (specifically section 4.3), this study is situated within a particular worldview and grounded on particular ideological principles, and these principles are not expected to be universally shared. What must be universally accepted, though, is that the apparently non-ideological, even anti-ideological approach, of accepting general ability measures as they are is in fact a deeply ideological position. While they measure a sizable portion of the construct of intelligence accurately, they are not complete and neutral arbiters of “potential” or “intelligence”, and to act as if they were without acknowledging their limitations is at best naïve and at worst acting in the utmost bad faith.

As the later models of intelligence and high ability we will focus on over the rest of this review were formulated after Terman’s study and the initial articulation of the domain general conception of giftedness, they all build on what they perceive as strengths of the domain general model while reacting to and attempting to correct what they consider its weaknesses. The main criticisms of this model beyond those specifically based on what it means for socioeconomically disadvantaged students will therefore be articulated through the lens of these subsequent models, beginning with Stanley’s (1973) Talent Search Model and domain-specific models of high ability more generally.

### 2.2.2 The Talent Search Model and Domain Specific Models

As Cross & Coleman (2005, p. 62) noted, there is no point in being gifted unless one is “gifted at something”. Ziegler & Stoeger (2017) have suggested that IQ tests are above all measures of cultural ‘proximity’, that answering the questions is less a matter of abstract intellectual ability than one of concrete cultural immersion. Both criticisms highlight some of the key shortcomings of domain general theories. Chiefly, these shortcomings are the difference between perceived potential and demonstrated achievement, and the gap between global ability and specific competence.

While Terman and Hollingworth, along with many other early to mid-20th century gifted educators, focussed on the power of single measures to capture general ability, later



theorists began to redefine the very idea of a high ability student by looking at the idea of different or multiple intelligences. Although Spearman's *g* generally showed a strong correlation in performance across different domains, it was not universally predictive, either within or between individuals (Boring, 1923). One early attempt to expand the idea of *intelligence* to *intelligences* was Howard Gardner's theory of Multiple Intelligences (Gardner, 1983; Gardner 1999), which initially named eight separate intelligences and has since grown to nine- musical-rhythmic, visual-spatial, verbal-linguistic, logical-mathematical, bodily-kinesthetic, interpersonal, intrapersonal, naturalistic and existential. Gardner's theory was bold in concept but lacking in empirical undergirding and rigour (Cross, 2015). The borders between intelligences are not always rigid- does dance require both musical and bodily-kinaesthetic intelligence or a fusion of the two or something in its own right? The intelligences are not all readily measurable- there is no test for interpersonal intelligence, no assessment for intrapersonal intelligence and no valid measure for existential intelligence. Gardner's theory remains popular outside the academy but little used within it. Klein (1998, p. 377) argues that this gap is because "a "weak" version of multiple intelligence theory would be uninteresting, whereas a "strong" version is not adequately supported by the evidence Gardner presents". While the "weak" version may be uninteresting in terms of advancing knowledge, it does present a way of talking about intelligence and intelligences which is useful for practitioners in the field.

A more rigorous and empirically supported conception of domain specific ability is that of Julian Stanley, whose Study of Mathematically Precocious Youth (SMPY) focussed on finding students with very high mathematical ability and accelerating their learning within the field of mathematics, later expanding to also include verbal reasoning ability (Stanley, 1973; Brody & Stanley, 2005). The basic idea is that aptitude, or ability, within a specific domain would go on to be converted into achievement within the domain, moving the emphasis away from inherent character traits and towards actions and behaviours. The US NAGC definition of a domain as "any structured area of activity with its own symbol system (e.g. mathematics, music, language) and/or set of sensorimotor skills (e.g. painting, dance, sports)" is open enough to include domains across all areas of human endeavour, though this study will focus on academic domains (NAGC 2010).

"Precocity", or aptitude in a field that is far ahead of the age norms is at the centre of this model, as reflected by its use of "out-of-level" testing for identification (Assouline & Lupkowski-Shoplik, 2012). This is the practice of assessing students using measures designed for older students, and it has two main advantages. Firstly, it overcomes the so-

called “ceiling effect”, whereby high ability students’ exact ability is obscured by the limits of a test which is too easy for them. Tests in which students can hit the ceiling (correctly answer every item) do not tell us these students’ true potential, they only give us a minimum point at or above which we know they are situated. Secondly, while these are ability measures rather than achievement measures, they do incorporate some aspects of achievement by requiring certain levels of knowledge within the relevant domain. By incorporating this level of prior achievement they ensure the identification and subsequent provision are firmly grounded in applied rather than abstract knowledge, giving a much stronger direction to programming than domain general identification measures.

The SMPY had impressive results in predicting student achievement: “a 2-hr test can identify 12-year-olds who will earn [a doctoral degree] at 50 times base-rate expectations” (Lubinski & Persson Benbow, 2006, p. 318). The Centre for Talented Youth (CTY) in John Hopkins was founded to continue and scale up the SMPY, and has expanded to offer courses across a wide array of subjects and formats, with over 150,000 alumni. (CTY, 2019). It continues to identify students through numerical and verbal reasoning measures in the Talent Search assessment. The CTY (and CTY, Ireland) model of identification and programming will be considered in greater detail in the next chapter.

Three criticisms of the Talent Search model bear investigating more deeply here, two general and one from the perspective of socioeconomically disadvantaged students. The latter is strikingly similar to the underrepresentation issues with domain general models discussed above, reflecting the uneven distribution of ability as measured by standardised assessments within domains as much as in general. Again, blind use of the Talent Search alone will lead to similar patterns of over- and underrepresentation.

Beyond this, the Talent Search only identifies students based on their ability in two domains (though it does offer them courses across many domains to further develop their talents). Thus the Talent Search might also have missed the two Nobel prize winners who flew under Terman’s one percent radar if their ability within the verbal or numerical domains was not as outstanding as their ability within the scientific domains. Secondly, the Talent Search might have missed them for another reason altogether: it was not exceptional ability (as measurable by standardised assessments) that underpinned their success but something else, or a combination of multiple factors. The next model we will examine, the Talent Development model, presents a comprehensive accounting of these other factors

and how they impact the conversion of potential into achievement and eventually eminence.

### 2.2.3 The Talent Development Model

While the first two models of high ability considered above focussed almost exclusively on this ability as measured in assessments, the Talent Development model takes a much broader perspective on what it means to be a high ability student and what the route from high potential child to highly achieving or even eminent adult should look like.

The Talent Development model of high ability education was articulated almost a century after Terman's study, and consciously builds on the many developments within the field since, as well as drawing upon relevant findings from related fields. The most important shift is the expansion of the focus of study from a child's assessed ability (global or domain-specific) to the entire trajectory of their development, with an effort made to capture all of the most important and influential aspects of the child's life in relation to their talent development. Since the articulation of early models in this tradition like Renzulli's (1986) Three Ring conception of giftedness, the tendency has been to draw ever more aspects of a student's life into the model. The Three Ring conception, for example, considers exceptional performance to be located at the intersection of above average academic ability ("performance or the potential for performance that is representative of the top 15-20% of any given area of human endeavour" [Renzulli, 2005, p. 232]), task commitment (defined as "a refined or focused form of motivation" [Renzulli, 2005, p. 235]) and creativity (able to produce "ideas and work [which] will actually have an impact on others and cause change" [Renzulli, 2005, p. 227]). While this widening of focus was productive in accounting for *some* of the discrepancies in outcomes between students with equal ability, it did not take into account any of the factors influencing these outcomes outside of the student's brain. Given the extra importance of environmental factors in the lives of students from socioeconomically disadvantaged backgrounds, this is a serious omission in the context of this study.

Addressing this gap, approaches like Gagné's (2004) Differentiated Model of Giftedness and Talent (DMGT) sought to capture all of the internal and external factors which impacted on a student's development. The DMGT prescribes a clear path from the identification of gifted children using ability measures through the stimulation and nurturing of these students with enrichment and accelerative programming to the ultimate

goal, achievement within a specific domain, or “talented” performance (Gagné, 2004). Within this progression from “natural abilities” to acquired “competencies” he stresses the importance of environmental factors like milieu and relationships with others and intrapersonal factors like character traits and metacognitive skills as “catalysts” which “contribute to a reaction without being constituents of the final product” (Gagné, 2004, p. 105). Above all, he stresses the ever present influence of chance, especially in what he terms the two major lotteries of birth, the genetic endowment and living situation which determine much of the rest of our lives (Gagné, 2004).

The talent development model draws heavily on the DMGT, also describing a developmental process of childhood potential (operationalised as measurable “natural ability”) being converted into adult achievement and eventually eminence through a targeted talent development framework. It features a much stronger critique of previous models of high ability than the DMGT, arguing that the

“disconnect between gifted performance in childhood and adult eminence leads us to argue that the current system of identification and education should be replaced with one that provides the necessary resources for children and adults with talents in specific domains to become path-breaking scholars, artists, athletes, leaders and professionals- should they so choose.” (Subotnik et al., p.6)

Rather than starting from the observation that a certain percentage of students score far above the average in ability measures (general or domain-specific), they invert the evidential chain and begin with the observation that certain adults achieve far beyond the norm within their fields. Incorporating the findings of K. Anders Ericsson and other scholars of “expert performance” (Ericsson, Krampe & Tesch-Römer, 1993), the talent development model works back from the eminent achievement of these adults to construct a pathway built on tried-and-tested evidence. In the popular imagination Ericsson’s findings have been condensed to the now widely known ten thousand hours figure (referring to the amount of work within a domain needed to reach expert levels of performance) (Gladwell, 2008), but Subotnik et al’s (2011) work focuses more on his concept of deliberate practice, or “activities that have been specially designed to improve the current level of performance” (Ericsson et al., 1993, p. 368). Central to the talent development model is the belief that “both cognitive and psychosocial variables are malleable and need to be deliberately cultivated” (Subotnik et al., 2011, p. 3). The conceptual leap from “giftedness” (a word which remains at the heart of the talent

development model) referring to a quality one *has* to a set of behaviours one *performs*, from something one *is* to something one *does* is based on this plasticity.

Plasticity is a concept which the talent development model uses to great effect. Its largest point of difference from the DMGT is in the reimagining of character traits as both constitutive of and constituted by the talent development process rather than as catalysts situated outside it. The authors maintain that “psychosocial strength training is as important as content and skill instruction and practice in a talent area” (Subotnik et al., 2011, p. 40), broadening the responsibility of the educator far beyond the delivery of academic content. The model draws especially heavily on theories of creativity (Amabile, 1996; Csikszentmihalyi, 1988; Plucker & Beghetto, 2004) and Carol Dweck’s (2006) *mindset* theory of motivation to fill perceived holes in previous models of giftedness and uses their findings to plug potential gaps in the talent development pipeline. While it mirrors other developmental models like the DMGT, the talent development model offers a far more comprehensive account of the process of individual development, though major practical improvements have yet to materialise. The model is thorough in its chronicling of the factors impacting upon the talent development process, but honest about the lack of existing best practices regarding these factors at time of publication (Subotnik et al., 2011, p. 38). In the intervening period the talent development model has been used widely, but has yet to yield the transformative outcomes its rethinking of giftedness and gifted education seemed to promise. The intractability of the issues involved in high ability education mean that the model is not expected to be instantly and entirely successful in achieving all of its aims, only more successful than previous approaches.

To a far greater extent than the previous models we have looked at, the talent development model is explicit about these aims, and also honest about what is outside of the scope of its interventions- “The talent development goal does not mean that self-actualization is not important; rather the suggestion is that self-actualization should not be the explicit goal of gifted-ed programs.” (Subotnik et al., 2011, p. 23). The authors go on to state that “society has a right to expect outcomes from its investment in developing children’s gifts.” (Subotnik et al., p. 23). Neither of these statements is untrue or outrageous, but they do speak to the stark utilitarianism at the heart of the model, its focus on getting the most possible achievement from the people with the most potential by giving them the most effective interventions. In this, the model echoes some of the more worrying trends in the wider field of education, what Lipman (2011) described as the “global project to gear education to “economic competitiveness” and to impose market discipline on all aspects of

schooling” (Lipmann, 2011, p.3). There is a strong element of the neoliberal attack on universal, public services “to produce the highly individualized, responsabilized subjects who have become ‘entrepreneurial actors across all dimensions of their lives’” (Brown, 2003, p. 38) in the talent development model’s advocacy of utterly individualised intervention rather than group-based approaches (Subotnik et al., 2011). The central idea that “when there are pressing national priorities and we resolve to identify and educate gifted students to address them, we can accelerate the pace of innovation and technological development” (Subotnik et al., 2011, p. 11) could be read as something akin to trickle-down academics. The claim is presented in the context of the NDEA and the 1960s burst of scientific innovation without any serious investigation into whether it was the individual genius of the highest performers or a general growth in talent across a wider section of society that drove the acceleration. Above all, the axiomatic idea that only economically productive, readily-quantifiable outcomes are valid is a reflection of what Roland Persson describes as

“doing the gifted a grave injustice by making them marketable or ‘financially appetizing’ when trying to fit them into a neoliberal production system for which most of them, according to research and experience, are clearly not suited.”  
(Persson, 2014, p. 51).

Many of these criticisms of the talent development model speak to a tension within the field of high ability studies between approaches based in the wider discipline of psychology (which tend to focus on individuals and quantifiable cognitive and psychosocial constructs) and approaches based in the wider discipline of education (which tend to focus more on collective measures and admit sociological critiques). Within Sternberg & Davidson’s (2005) *Conceptions of Giftedness*, for example, Borland, Reis and Gordon & Bridglall’s essays are most clearly within the educational/sociological tradition while the rest of the essays are located within the psychological tradition. Freeman and Plucker & Barab’s essays are interesting combinations of the two traditions. One reason this study will not adopt the talent development model arises from the belief that incorporating sociological critiques is fundamental to any meaningful conception of high ability that seeks to provide for students from disadvantaged backgrounds. The talent development model presents a coherent and compelling account of how those with the most potential can develop into eminent achievers, but it is not concerned with how the uneven distribution of potential reflects the uneven distribution of social advantage. Subotnik et al’s (2011) defence of gifted programming on this front is telling: “Further,

over one million of the approximately 20 million children who qualify for free or reduced lunch rank in the top 25% of students based on achievement in Grade 1, although only 56% of these students maintain their status as high achievers by Grade 5.” (Subotnik et al. 2011, p. 12). The fact that only 5% of socioeconomically disadvantaged students scored in the top quartile in grade 1, and that this had fallen to less than 3% by Grade 5, is surely grounds for concern and concerted action rather than proof that gifted programmes are not demographically problematic. They are correct in their refutation of the idea that “Gifted programs exist to advantage only a segment of society” (Subotnik et al. 2011, p. 12) but unwilling to seriously engage with the fact that gifted programs’ existences disproportionately advantage certain segments of society. The authors behind the talent development model are, however, not unsympathetic to the difficulties in “supporting high achievement of low-income, high-ability students” (Olszewski-Kubilius & Clarenbach, 2012), asserting that the field

“will require substantial, sustained research to develop a comprehensive picture of the paths of low-income and culturally and linguistically diverse students in order to understand what their experiences are, where in their journeys they are most likely to falter and why, and what helps them most to stay on track.” (Olszewski-Kubilius & Clarenbach, 2012, p. 24)

While substantial and sustained research is most certainly required, the talent development model’s incredibly narrow focus on the absolute highest performers means that there will remain a tension between its central ideology and its attempts to serve traditionally underserved groups. While the two are not incompatible, there are strong contradictions which need to be worked out, contradictions which will be looked at in greater detail in section 2.3. First though, the next section will consider the model which I believe promises the best opportunity to resolve the contradictions within the provision of high ability programming and support for students from disadvantaged backgrounds, Ziegler’s (2005) Actiotope model.

#### 2.2.4 The Actiotope Model

The final model that will be looked at in detail is Ziegler’s (2005) Actiotope model, which is also the model on which this study will base its working definition of high ability. A systemic theory, “the Actiotope Model of Giftedness emphasizes the dynamic interaction

of individuals with the environment... The focus of interest under the Actiotope Model, then, are actions not traits” (Ziegler, Vialle & Wimmer, 2013, p. 1). “Ability” is reimagined as the possession of “effective action repertoires” within a given domain (Ziegler, Vialle & Wimmer, 2013, p. 2). The factors influencing the development of these effective action repertoires, meanwhile, remain as multifaceted as in developmental models like the talent development model or DMGT- “An actiotope includes an individual and the material, social and informational environment in which that individual actively interacts.” (Ziegler, Vialle & Wimmer, 2013, p. 3). In this section we will first look at how the action repertoire is conceived and the model’s proposals for building effective action repertoires and then consider the advantages and disadvantages to the model’s systemic approach and its use of “educational capitals” and “learning capitals” to describe environmental factors.

At its most basic level, an individual’s action repertoire is simply “the possibilities for acting which they could realize in principle.” (Ziegler, Vialle & Wimmer, 2013, p. 1). An inexperienced chess player and a grandmaster, looking at the same configuration of pieces on a chess board, will nonetheless have vastly different action repertoires, though the same two people might have very similar action repertoires in a field in which both are total novices such as ice hockey. The action repertoire is thus both unique to an individual *and* shaped by the domain within which the action takes place in such a way that people at similar levels of expertise within a domain will have similar but not identical action repertoires. The ultimate aim of “learning episodes” (discrete but linked programmes and interventions) under the Actiotope model is for students to build up an action repertoire stocked with “excellent actions”, the hallmark of an expert in the field. Ziegler (2005) describes the characteristics which distinguish the expert action repertoire as the possession of a more extensive choice of actions, the use of rich, situation-specific information storage and analysis of problems to access effective actions, introspection in deciding on the best approach to solving specific problems, the availability of greater cognitive effort to consider these problems due to the automation of common processes, as well as actual physical adaptations over a period of involvement in the field (Ziegler, Vialle & Wimmer, 2013, p. 2). The “learning pathway” which takes students from novice to expert in a field is structured around developing these characteristics, with different forms of instruction and different types of content needed at various stages along the way (Ziegler, Vialle & Wimmer, 2013, p. 10). The excellent actions themselves

“show four characteristics. The action in question: is part of the repertoire of actions of the person; pursues an aim that seems reachable because of this action; is



made possible because the situation was constituted in a way to allow this action; and, is selected because the person decided that the action was the most expedient in this situation from the repertoire of possible action.” (Ziegler, Vialle & Wimmer, 2013, p. 4).

These four characteristics can also be thought of as competency, goals, environment and subjective action space (Ziegler, Vialle & Wimmer, 2013, p. 4).

In its conception of competencies and goals, the Actiotope model draws heavily on earlier models of high ability, though it reframes the unit of analysis around actions, expanding the feasible “learning pathways” to include any route which culminates in effective actions (Ziegler & Stoeger, 2017). Under this reframing, IQ and other general ability measures are “an indicator (but by no means an explanation) of an effective repertoire of actions” (Ziegler, Vialle & Wimmer, 2013, p. 14). IQ scores and results from other standardised measures of ability, therefore, can be thought of as a useful gauge of a student’s relative ability and potential, but only within one aspect of the many factors which interact dynamically to form the student’s entire actiotope. The construct of goals within the model incorporates the motivational aspect of wanting something enough to work for it and the concrete knowledge of how to direct that work, and Ziegler et al. (2013) argue that learning episodes should work to stimulate both. In this it echoes the talent development model’s concept of plasticity, but it draws a clearer image of how goals, competencies and the environment interact through the concept of the subjective action space, The actiotope’s dynamic system, with its many moving parts and greater complexity as a result of the myriad interactions between these parts, is certainly daunting, but its comprehensive accounting of these parts and interactions also give educators a framework through which to address all of these moving parts.

Perhaps the most important innovation the actiotope model draws from systemic theories beyond the field of gifted education (most notably the ecological systems theory of Bronfenbrenner [1992]) is the concept of dynamic stability as key to the learning pathway. While developmental and domain specific models of high ability (as well as some domain general approaches) emphasise growth as the goal of their programmes, they embrace a largely uncomplicated conception of this growth as entirely positive, something to be maximised at almost any cost. The actiotope model nuances this view through the concept of stability: the aim is not just to have growth but to have homeorhesis, a rate of growth that is stable within the system (Ziegler & Stoeger, 2017). Within other models, everything

is implicitly subordinated to growth but within the actiotope model the wellbeing of the entire system must be considered in finding the optimum rate of stable growth. Feedback loops are central to the idea of stable growth. The promotion of positive feedback loops and the identification and eradication of negative feedback loops are key elements of learning episodes, continuing the increase in growth after the end of the episode and reinforcing the overall stability of the growing system.

The actual mechanism through which growth in the effective action repertoire takes place is the development of the learning and educational capitals. These are the resources a student has available to them to pursue their goals, and they span the entire actiotope. The five learning capitals are endogenous (or internal) resources and include organismic, actional, episodic, telic and attentional capital (Ziegler, Vialle & Wimmer, 2013, p. 12). The educational capitals, meanwhile, are exogenous (or external) resources and include economic, cultural, social, infrastructural and didactic capital (Ziegler, Vialle & Wimmer, 2013, p. 11). The learning and educational capitals are powerful conceptual tools through which to consider the effects of a learning episode on a student's entire actiotope, and the application of the actiotope model to a real programme for high ability students from socioeconomically disadvantaged students will be articulated in the next chapter. The educational capital approach is especially productive in the context of a group defined by its lack of access to various capitals in both the actiotope context and in a wider definition of the term. What these capitals comprise in their wider definitions and their role in shaping students' educational opportunities and trajectories will be considered in the next section.

## 2.3 Educational Disadvantage

The ongoing debate over what high ability is, where it comes from and how it impacts students' lives is, in many ways, mirrored in the literature on educational disadvantage. Educational disadvantage is a phenomenon, or a constellation of entwined phenomena, whose existence is obvious in statistics on educational attainment and life outcomes, but which remains difficult to pin down in a precise definition. Part of the difficulty is that the roots of disadvantage are manifold- children can be disadvantaged as a result of their class or socioeconomic status (Sirin, 2005), their race or ethnicity (Kao & Thomson, 2003), their gender (Guiso et al., 2008), their language (Rance-Roney, 2009), their geographical

location (Roscigno & Crowle, 2001) or many other demographic characteristics. There are often complex interrelationships between the variables involved- a child may experience multiple forms of disadvantage at once (Bhavnani & Phoenix, 1994; Kozol, 1991), or their identity along one of these axes may be a protective factor shielding them from the effects of another form of disadvantage (Ong et al., 2006). Gendered disadvantage, for example, affects students differently in different contexts- while there is a general achievement gap between boys and girls which favours girls (Legewie & DiPrete, 2012), girls in many countries remain less likely to achieve in STEM subjects, a trend which becomes more pronounced as they move up through the education system (Guiso et al., 2008; Tellhed et al., 2017).

There are methodological and practical difficulties confronting research on the subject- there remains no ethical way to run an experimental design by allocating some children to a control group and other children to poverty. Quantitative approaches struggle to capture the nuances of individual cases and often rely on grouping non-equivalent measures of disadvantage together (Sirin, 2005; Hauser 1994), while rich qualitative accounts remain relatively rare and lack the statistical power to generalise findings (Attree, 2006). Ideological factors play a strong role in shaping multiple interpretations of the same data- the causal chain drawn by Murray & Herrnstein (1994) which locates disadvantaged groups' life trajectories in their inherent traits and characteristics is reversed by critics who instead examine their traits and characteristics being shaped by their life trajectories (eg. Borland, 2004). The approaches to the study of disadvantaged groups range from practical attempts to describe *who* they are and *what* sort of interventions they need to broader theoretical attempts to understand *how* disadvantage functions and *why* it exists.

### 2.3.1 Theoretical Accounts of Educational Disadvantage

Perhaps the most well-known of these theoretical accounts in the field of sociology is that of Pierre Bourdieu, who saw educational disadvantage arising as a direct result of education being “one of the most effective means of perpetuating the existing social pattern” (Bourdieu, 1974, p. 32). He proposed

“a theoretical hypothesis which made it possible to explain the unequal scholastic achievement of children originating from the different social classes by relating academic success, i.e., the specific profits which children from the different classes

and class fractions can obtain in the academic market, to the distribution of cultural capital between the classes and class fractions” (Bourdieu, 1986, p. 243)

In other words, cultural capital functions as the legitimating wing of economic capital, not perfectly correlated but strongly associated (Reay, 2010). The education system, Bourdieu argued, ignored the varying levels of cultural capital among its students while engaging in a pedagogy which was oriented towards those with higher amounts of cultural capital, with disastrous but entirely predictable results for disadvantaged students:

“By making social hierarchies and the reproduction of these hierarchies appear based upon the hierarchy of ‘gifts’, merits, or skill established and ratified by its sanctions, or, in a word, by converting social hierarchies into academic hierarchies, the educational system fulfils a function of legitimation which is more and more necessary to the perpetuation of the ‘social order’ as the evolution of the power relationship between classes tends more completely to exclude the imposition of a hierarchy based upon the crude and ruthless affirmation of the power relationship” (Bourdieu, 1973, p. 84).

This critique, that disadvantage is not a bug but a feature of the education system, was also articulated by Paulo Freire, a philosopher of education who conceived of disadvantage as creating a binary between the oppressors and the oppressed. Shaul (2005) notes that Freire saw the existing education system as “an instrument which is used to facilitate integration of the younger generation into the logic of the present system and bring about conformity” (Shaul, 2005, p. 34). Freire called instead for a “radical posture” of solidarity (Freire, 2005, p. 49), through which education became a vehicle for “the practice of freedom, the means by which men and women deal critically and creatively with reality and discover how to participate in the transformation of their world” (Shaul, 2005, p. 34). This tension between education as a reifying agent for the status quo and its potential for transformation and liberation is also echoed by Michel Foucault:

“Education may well be, as of right, the instrument whereby every individual, in a society like our own, can gain access to any kind of discourse. But we well know that in its distribution, in what it permits and in what it prevents, it follows the well-trodden battle-lines of social conflict. Every educational system is a political means of maintaining or of modifying the appropriation of discourse, with the knowledge and the powers it carries with it.” (Foucault, 1972, p. 227)

We will return to Foucault, Friere and Bourdieu in the research design section, as their contributions to the philosophy of science are important in the methodological approach this study has taken. In the meantime, their emphasis on the essential and inevitable implication of the education system in structures of power and material relations is an invaluable theoretical lens through which to approach empirical data on educational disadvantage. Their work highlights the fact that education is not an innocent project of knowledge transfer, but a site of struggle over what sort of citizens will be produced. Their suggestion that the qualities necessary to succeed in education are first and foremost the qualities of the classes who have already succeeded in education and thus exercise the most power within society at large has huge ramifications for work with disadvantaged students. For educational success to move beyond being a measure of this proximity to capital (economic, social and cultural), those working in the field must espouse a deep reflexivity to understand why this has been the case and maintain a commitment to concerted action to overcome it. Above all, these theorists make it clear that any educational enterprise examining disadvantage must be careful not to mistake what *is* for what *must be* or even what *should be*, and ensure that the role of history and politics in creating contingent conditions are not obscured by some mythic “natural order”.

On a final theoretical note, the term “disadvantage” itself has been the subject of significant dispute, with critics fearing that deficit-thinking is inherent to the term and that this deficit-thinking may contribute to the problems described by the term (Spring, 2007). There is also a worry that overly vague application of the term will inhibit efforts to understand and counter the particular effects experienced by specific groups and communities (Natriello et al., 1990). Many studies now substitute terms like “low-income” for “disadvantaged” in the interest of greater precision and out of a desire not to be a part of the problem (Van-Tassel Baska, 2018; Riedl Cross & Dockery, 2014). While these critiques are welcome examples of the sort of reflexive engagement with the field which is necessary to achieve change, I believe that the term “disadvantaged” is still worth using in this study. While the term “low-income” may be a more accurate descriptor of some cohorts, it does not capture the lived reality of the students taking part in this programme, as we shall see in section 3.4. As this review of the literature will show, their socioeconomic circumstances disadvantage them in many ways within the mainstream educational system. This is not a moral judgement but a recognition of the barriers and challenges facing them. Terms like “low income” can function to elide the reality of social hierarchy and differential access to opportunities by suggesting that the issue is simply one

of a lack of economic capital without considering the intersectional nature of inequities of economic, social and cultural capital, and ignoring how much is determined by relative placement on the hierarchy rather than absolute measures of income or wealth. As Watson et al. (2017) note, “Since the work of Townsend (1979) it is accepted that poverty does not simply consist of low income but that it is more broadly about the ‘inability to participate fully in society’ due to a lack of resources [Townsend, 1979, p.31]”. (Watson et al., 2017, p. 125). They go on to describe the “effect of multidimensional disadvantage”, wherein among “the most disadvantaged 15% on a range of quality of life dimensions, we find that at least half of those with any specific kind of problem have at least two other quality of life problems” (Watson et al., 2017, p. 141). The focus will now turn to concrete and applied definitions and examples of this multidimensional disadvantage and attempts to counter it.

### 2.3.2 Practical Definitions of Educational Disadvantage

Even applied definitions of educational disadvantage are often incredibly broad: the official definition under Irish law, for example, is that of the 1998 Education Act-

“educational disadvantage” means the impediments to education arising from social or economic disadvantage which prevent students from deriving appropriate benefit from education in schools.” (Government of Ireland, 1998).

As Kellaghan (2001) points out, the tautological legerdemain of using the word disadvantage within the definition (with no further explanation of social or economic disadvantage) does little to clarify matters. Kellaghan also criticises the definition’s failure to include cultural disadvantage or to identify the impediments facing students or to examine how they work (Kellaghan, 2001). Kellaghan’s own definition is far more concrete-

“a child may be regarded as being at a disadvantage at school *if because of factors in the child’s environment conceptualized as economic, cultural and social capital, the competencies and dispositions which he/she brings to school differ from the competencies and dispositions which are valued in schools and which are required to facilitate adaptation to school and school learning.*” (Kellaghan, 2001 emphasis original p. 5.).

This definition echoes Bourdieu insofar as it recognises that the root of educational disadvantage is in the disparity between what is valued in school and what is valued in the child's life outside of school, though it does not adopt Bourdieu's explicit location of this disparity in the social class system. The categories of "competencies" and "dispositions" are very productive ones, grounding the analysis in observable behaviours, though the overall analysis is weakened by the failure to truly consider why certain competencies and dispositions are valued in schools but not in the lives of disadvantaged students, and whether valuing other competencies and dispositions could better serve this community without compromising their education.

Of the three forms of capital which can lead to disadvantage in Kellaghan's definition, economic capital is the most easily defined and measured. Economic capital comprises all of the material resources a family has at its disposal, with financial resources being the most important (Kellaghan, 2001, p.9). Social capital is more abstract, and "considered to be embedded in relationships between individuals in informal social networks." (Kellaghan, 2001, p.10). Cultural capital is similarly abstract, relating "primarily to the conditions that foster cognitive and scholastic development". (Kellaghan, 2001, p.7). Unfortunately, few studies of the effects of disadvantage attempt to disentangle the effects of each of the three forms (Kellaghan, 2001). Kellaghan (2001) points out that educational interventions can and have improved social capital and cultural capital, but it is still not clear how much of an impact this has without accompanying improvements in economic capital. We will return to the potential for improving social and cultural capital through interventions specifically for high ability students in the next section.

Socioeconomic status is a construct which aims to capture an individual or family's level of these three capitals. Kellaghan et al. (1995, p. 34) argue the single most effective "overall measure of an individual's position in the economic, power and prestige dimensions of the socio-economic hierarchy" is parental occupation, with non-skilled workers, manual workers and households with low work intensity most likely to be at the bottom of the hierarchy. Severe socioeconomic disadvantage is captured by the term poverty, defined by the Irish government's (2007) National Action Plan for Social Inclusion as

"People are living in poverty if their income and resources (material, cultural and social) are so inadequate as to preclude them from having a standard of living

which is regarded as acceptable by Irish society generally. As a result of inadequate income and resources people may be excluded and marginalised from participating in activities which are considered the norm for other people in society.” (Office for Social Inclusion, 2007. p.21)

Living in poverty has serious effects on children’s educational trajectory long before they enter school: as Olszewski-Kubilius & Clarenbach (2012, p. 9) note, “the association between poverty and children’s academic performance begins as early as age two”. An Irish study of results from national assessments and specific DEIS school evaluation found that “of a wide range of variables considered, family poverty remains the largest determinant of educational outcomes.” (Kavanagh & Weir, 2018, p. vii). As mentioned in section 2.2.1, poverty has been linked to smaller vocabularies (Hart & Risley, 2003), differences in brain structure (Hair et al., 2015) and debilitating levels of stress (Evans & Kim, 2013) in students from a very young age. Given this unequal start, it is no surprise that the “achievement gap” is present from the first day of school and widens further as students progress through the education system (Wyner, Bridgeland & Diulio, 2007). Wyner et al. (2007, p. 35) characterise the “alarming” educational experience of these students as “marked by disadvantage through elementary school, unequal opportunity in high school, and inferior rates of college and graduate-school completion.” In other words, the effects of disadvantage are cumulative.

Similarly, competencies and dispositions can create a negative feedback loop for disadvantaged students, as their relative weakness in certain academic subjects is interpreted (both internally and externally) as an inherent and unchangeable trait (VanTassel-Baska, Olszewski-Kubilius & Kulieke, 1994). Various forms of motivation have been found to be lower for disadvantaged students, an issue whose causes span their entire environment. Lareau (2011) points to the relationship between social class and “the cultural logic of childrearing”, suggesting that the “concerted cultivation” approach of middle class parents is far better suited to getting students through the education system (whether they have any great intrinsic motivation or not) than the “accomplishment of natural growth” approach taken by working-class parents. Sellar & Gale (2011) define aspiration as “the capacity to imagine futures”, drawing attention to the difficulty of believing in a future which you have no experience of, and which vast swathes of the world tell you is not for people like you. Differences in this capacity go a long way towards explaining the aspiration gap between children whose parents completed college



and now visibly reap the rewards and children whose parents may not even have completed second level education and thus lack knowledge of the education system and concrete experience of the benefits of higher education (Lareau, 2011).

### 2.3.3 Educational Disadvantage & Higher Education Participation

Parental educational attainment remains one of the strongest predictors of children's educational attainment (Davis-Kean, 2005), a reflection of the vicious cycle through which lack of economic capital translates into lack of social and cultural capital which restricts opportunities to increase economic capital and so on. In a society in which educational attainment is highly correlated with life earnings and other outcomes (McCoy et al., 2014), it is not difficult to see how disadvantage is thus transmitted generationally. Although Ireland has one of the highest rates of progression to third level in the OECD, students from disadvantaged backgrounds are much more likely to drop out of school without completing their Leaving Certificate and much more likely not to continue on to third level (McCoy et al., 2014).

Ireland nominally has universal free third-level education and a means-tested grant system for students from disadvantaged backgrounds, but most third-level institutions do charge an "annual students contribution" of up to €3,000, though this is supposed to be used only to cover student services and examination. The maintenance grant for socioeconomically disadvantaged students covers this fee (Citizen's Information, 2018), yet resources remain a large barrier for many students (McGuinness et al., 2012). McGuinness et al. (2012) have identified "academic preparedness" as another crucial obstacle, as cumulative disadvantage builds throughout the student's journey through the educational system, which can contribute to substantial gaps in academic ability and psychosocial factors for college-age students. The Irish Higher Education Authority (HEA) has recognised the need to increase the proportion of students from disadvantaged backgrounds attending third-level institutes (HEA, 2015), with national schemes like the Higher Education Access Route (HEAR) and institution-level initiatives targeting students, schools and communities. The DCU Access scheme is one such institutional initiative, and will be looked at in greater detail in the next chapter as it is an integral component of this study.

The social benefits of increasing third-level participation rates among traditionally underrepresented groups are clear. The Irish economy's survival is dependent on a

combination of foreign direct investment, indigenous innovative businesses and a strong public sector, all of which are reliant on large numbers of college graduates (DPER, 2018). The increased earnings associated with a college degree translate into a greater tax take for the state, as well as a lower likelihood of claiming state assistance (McCoy et al., 2014). Greater educational attainment is also associated with better health outcomes over the course of an individual's lifetime (IPH, 2008). Aside from the universal benefits of having greater numbers of college graduates, the specific benefits of improving these outcomes among marginalised communities include the likely decrease in inequality, a measure which has been found to be associated with instability, democratic deficits and worse average outcomes across educational, economic and health measures (Galbraith, 2012). The benefits of diversity in elite positions is also often underestimated (Sutton Trust, 2016), as is the importance of having people in positions of influence and power to act as a role model for children from similar backgrounds and show that social mobility is not just empty rhetoric but an actual possibility (Sutton Trust, 2016).

### 2.3.4 School-Level Disadvantage

Perhaps the largest criticism of Kellaghan's (2001) definition of educational disadvantage is its conception of "the school" as a monolith, implicitly suggesting that schools are always and everywhere the same. Not only do all schools have their own individual strengths, weaknesses and idiosyncrasies, but these qualities are often strongly correlated with the demographics of the population the school is serving. This trend is perhaps most pronounced in the US, where 40% of low-income students attended high-poverty schools (schools where over 75% of students qualify for free school lunches), while only 6% of low-income students attended low-poverty schools (schools where less than 25% of students qualify for free school lunches) (NCES, 2010). This *de facto* segregation has tangible academic consequences: Phillips & Chin (2004, p. 497) note that "average performance of fourth-graders in low poverty schools is over a standard deviation higher than the average reading performance of fourth-graders in high poverty school". The school environment reflects wider social segregation: One US study based in New Jersey found that

"three variables: (a) percentage of families in a community with income over \$200,000 a year, (b) percentage of people in a community in poverty, and (c) percentage of people in a community with bachelor's degrees...accurately predicted

[percentage of students scoring proficient or above in standardised tests] for 78% of our samples.” (Tienken et al., 2017, p. 8)

Internationally, Masci, Johnes & Agasisti (2018, p. 1080) found that “schools with a high proportion of disadvantaged students suffer a negative impact on performances” across eight of the nine countries surveyed. The Irish education system does not share the worst of the “savage inequalities” (Kozol, 1991) of the US system, and Ireland does not have areas with comparable levels of concentrated disadvantage to the most impoverished regions of the US. Nonetheless, an Irish study of educational disadvantage notes that

“students attending schools with a high concentration of working-class students are more likely to leave school early, have poorer attendance rates and tend to achieve lower Junior Certificate and Leaving Certificate results than other students, even controlling for their own social background.” (Smyth & McCoy, 2009, p. 16)

The Department of Education and Skills (DES) has recognised the need for greater resource allocation and tailored approaches for schools in areas of concentrated disadvantage since 1984, with multiple initiatives addressing the effects of disadvantage from different angles. Schools with a high concentration of disadvantaged students suffer from greater classroom management issues, generally employ less experienced teachers and struggle to maintain an atmosphere where high achievement is expected of students (Smyth & McCoy, 2009). Several of the DES programmes have had real success, not least the DEIS scheme for Irish primary and secondary schools which now caters to almost half of Ireland’s disadvantaged young people (Smyth & McCoy, 2009, p. 57). The DEIS scheme is based on “a standardised system for identifying, and regularly reviewing, levels of disadvantage”, and using this system to build “a new integrated School Support Programme (SSP) which will bring together, and build upon, existing interventions for schools and school clusters/communities with a concentrated level of educational disadvantage.” (Department of Education & Science, 2005, p. 9). The SSP aims to expand early educational interventions, improve student:teacher ratios, provide more non-academic support staff and target literacy and numeracy skills in schools with a concentrated level of disadvantage.

Evaluations of the scheme show strong gains in achievement outcomes in maths and reading for students in primary school between 2007 and 2016 (Kavanagh, Weir & Moran,

2017). The gains were most marked at the lower end of the distribution but also present at the top end (Kavanagh, Weir & Moran, 2017). Aspirations around third-level education were found to be similar to those of students and parents in non-DEIS schools, but there was a significant gap in expectations that this would actually be the case (Kavanagh & Weir, 2018). The proportion of students “reporting that they liked school was higher in 2016 than at any previous year” (Kavanagh, Weir & Moran, 2017, p. 28), and liking school was associated with higher achievement. However, the rate of growth in achievement seems to be falling, with much lower increases between 2013 and 2016 than between 2007 and 2010 or 2010 and 2013. This “levelling off of gains” (Kavanagh, Weir & Moran, 2017, p. 15) is used by Kavanagh & Weir (2018, p. vii) to suggest that “until economic inequality is addressed, the achievement gap between children from poor backgrounds and their more affluent counterparts is likely to persist.”

The ceiling of gains from educational interventions alone which Kavanagh & Weir point to is found across several studies of educational disadvantage. One of the largest changes mentioned in the literature is discussed by Nisbett et al. (2012), who found that children adopted from impoverished settings into middle-class families gained 12 to 18 points on IQ measures. This strongly suggests that environmental factors play a huge role, either because the underlying ability measured by tests was improved or because children became familiar with the culturally determined range of knowledge featured in the test. It also shows that outcomes are not set in stone but malleable in the case of environmental change, though obviously adoption is not an achievable or desirable mass solution. Numerous interventions have attempted to improve outcomes through less radical changes to the child’s environment, chiefly focussing on improving the school environment and the child and their family’s relationship with it (DES, 2006). Alterations to the home environment also promise moderate gains in achievement, with Kavanagh & Weir (2018, p. 68) identifying several “ways in which parents can be usefully advised to support their children’s literacy and numeracy developments at home, regardless of their socioeconomic status.” These include straightforward steps like removing televisions from bedrooms and reducing time spent on mobile phones, as well as daily actions like reading with a child and helping them with their homework, which are not always straightforward for parents with little time to spare or without confidence in their own literacy and academic ability (Kavanagh & Weir, 2018).

Overall, it is clear that educational disadvantage is an urgent problem within Ireland and around the world. Its roots are deep and difficult to discern, not to mind dislodge. Its effects are insidious and act over the entire lifetime of the student. It is not exclusively an issue with the education system, and will not be solved by educational solutions alone. This all being the case, it may seem a perverse use of resources to target interventions at the most able disadvantaged students, those who are already achieving within the education system, when the problems facing less able disadvantaged students seem so much greater. While I would never argue that the former cohort deserve resources *over* the latter, they certainly need support as well, and perhaps even as much. The next section will look at the essentially liminal field that is the study of “gifted disadvantaged” students, exploring the tension within the oxymoronic name and how it has led to students being seen by various parties as either not gifted enough or not disadvantaged enough to receive support.

## 2.4 High Ability Students From Disadvantaged Backgrounds

One of the chief reasons I argue against the use of the term “gifted” is how much it chafes when combined with the term “disadvantaged”. Its connotations of effortless ability and predestined success simply do not tally with the lived experience of high ability students from disadvantaged backgrounds. Above all though, the term simply has too much historical baggage, and continuing to use it suggests a field unwilling to engage seriously with its problematic past. As discussed in section 2.2.1, as long as there has been an organised academic field devoted to the study of high ability individuals there has been criticism over how much that field mirrors and reinforces the socioeconomic structure of its time. In this section we will begin by looking at the empirical data on the underrepresentation of socioeconomically disadvantaged students and other marginalised groups in gifted programmes, before turning to some of the issues specific to these students which help explain this underrepresentation. Finally, the implications of these findings for the field will be considered in order to articulate a coherent approach to identifying and providing programming for high ability students from socioeconomically disadvantaged backgrounds.

Due to the abundance of different types of programme for high ability students and the range of identification methods and local variables involved there is no single figure for the representation of different groups. In the US, students from disadvantaged backgrounds,

students of colour and students who speak English as a second language are almost universally underrepresented on programmes for high ability students, but the exact figure varies from institution to institution. Ford & Webb claim that “abundant data suggest that gifted programs are perhaps the most segregated educational programs in this nation (Ford & Webb, 1994, p. 22). Card & Juliano note that in “the large urban district we study, the gifted program participation rate for students who receive free or reduced price lunches was 1.9% in the 2004-5 period, while the rate for other students was 5.5%.” (Card & Juliano, 2016, p. 1).

The reason for this underrepresentation seems to be twofold: Students from these groups are less likely to be nominated for identification in the first place and less likely to be identified after being nominated. Teachers are less likely to believe students from disadvantaged backgrounds are capable of high achievement, leading to them missing signs of high ability that would be much more quickly picked up in a middle-class student (McBee, Peters & Miller, 2016; Harradine et al., 2014). Parents without a history of educational attainment are less likely to notice children’s ability and less likely to know what to do about it once it has been noticed (Harris & Goodall, 2008). Students are less likely to have the confidence and motivation to put themselves forward for identification: Olszewski-Kubilius & Clarenbach (2012, p. 12) describe the problem of motivation through “a dual-level view of motivation affecting academic choices that boils down to “Can I do it and do I want to do it?”

The question of ‘Can I do it?’ is often enough to deter high ability students from disadvantaged backgrounds from seeking advanced programmes and undergoing competitive identification measures (VanTassel-Baska, Olszewski-Kubilius & Kulieke, 1994). Riedl Cross and Dockery (2014) point to students’ educational experiences as contributing to the issue, as they are more likely to be in schools which “focus on lower level instructional strategies and high stakes test preparation”, and in which they “lack opportunities to take courses with sufficient academic rigour for their talents” and thus never develop the academic and metacognitive skills to tackle material beyond their comfort zone (Riedl Cross & Dockery, 2014, p. 5). Johnson, Richeson & Finkel (2011) describe the students as possessing a stigmatised identity, which can lead to perceptions of academic inadequacy in challenging academic settings. Steele describes another impact of this stigmatised identity through stereotype threat, defined as the “risk of confirming, as self-characteristic, a negative stereotype about one's group” (Steele & Aronson, 1995, p.

797). In other words, believing that people like them are not good at something makes students from certain groups more likely to underperform in that area relative to equally able students from non-marginalised groups (Steele, 1997). Steele's work focussed on the impact of stereotype threat on African-American students and women, but Croizet & Millet (2011) describe its impact on socioeconomically disadvantaged students as consistent with Steele's findings, though they note that not enough research has been done.

For those students who do believe they can do it, the question "Do I want to do it?" remains. As noted in the previous section, students with no family history of educational attainment are less likely to see the benefits of educational experiences as these benefits remain an abstract promise rather than a tangible part of their lived reality (Webb et al., 2015). There is also a far greater likelihood that disadvantaged students will never get to experience the offered intervention even if they do qualify (Kettler, Russell & Puryear, 2015)- as Van Tassel Baska notes, "students from poverty have often learned disappointment early" (2018, p. 69). While some students from all backgrounds are uncomfortable with the idea of special programmes for high ability students and fear the "stigma of giftedness" (Cross, Coleman & Stewart, 1991; Manor-Bullock, Look & Dixon, 1995), for disadvantaged students there can be a deep sense of incompatibility between these programmes and the rest of their lives. Fordham & Ogbu (1986) suggest there is a fear among African-American students of "acting white", or conforming to the mainstream culture's mores and affectations at the expense of one's own modes of expression. A similar "oppositional culture" has been articulated by working class students, taking the form of both shame (peer stigma and even bullying) and guilt (self-reproach over feelings of turning one's back on one's culture) (Gilbert & Gilbert, 2001). Students may feel that the only way to maintain their cultural identity is to suppress their academic ability (Worrell, 2014), or see a gulf opening up between their life trajectories and those of their social circle and wider community (Ford, 2010). Matthews points to how students and their parents may be wary of being "singled out for academic prowess" (Matthews, 2006, p. 5), viewing it as a threat to their socioemotional wellbeing rather than an opportunity for personal development.

On the other hand, Fordham & Ogbu's (1986) "acting white" theory has been questioned as a hypothesis, with Downey & Ainsworth-Darnell (2002) suggesting that the evidence for it is weak and Horvat & Lewis (2003, p. 265) highlighting the "ability of students to sustain an authentic black identity and to achieve academically by effectively managing

their academic success among their peers.” Sperling & Vaughan (2009) describe hypotheses like the “acting white” theory as ‘culture blaming’, and suggest that people who prefer cultural explanations of the achievement gap over structural explanations are more likely to prefer cultural solutions rather than structural changes. While ‘culture blaming’ is less controversial than biological essentialism, it still locates the problems disadvantaged students face within the students themselves, their families and their wider community (Sperling & Vaughan, 2009). Wildhagen (2011, p. 460) argues that while “this kind of message is politically popular because it resonates with Americans’ deeply held beliefs... it is inconsistent with empirical reality” and that this kind of “public discourse leads to public support for educational policies that simply will not help to equalize academic outcomes across groups.” The ‘acting white’ debate is a prime example of the thorny relationship between cultural capital and disadvantage, with the empirical data still not strong enough to justify the attribution of the achievement gap to either cultural or structural factors.

Much like confidence and motivation, high ability more broadly is shaped by the contours of students’ lives, so it manifests differently in different contexts. Energies which middle-class students can direct entirely towards academic pursuits are often diverted or drained by the exigencies of daily life (Evans & Kim, 2013). Competencies which are strongly supported and encouraged within middle-class families are less actively pursued, with literacy skills especially differing between the two groups (Gagné, 2011). The different forms high ability takes, the different action repertoires students develop, also contribute to a lower likelihood of students from disadvantaged backgrounds scoring highly enough on identification measures to qualify for special programmes. The split between academic environments and the rest of the child’s life which defines educational disadvantage for Kellaghan has been pointed to as a block for disadvantaged students, a gap which prevents them translating skills from one context to another and thus lowers performance below their real capability (VanTassel-Baska, 2018). With regard to the “excellence gap”, Plucker, Burroughs and Song (2010, p. 18) note that in the US “at the present rate, it would take 38 years for free-lunch eligible children to match more affluent children in Math Grade 4”, and in Math Grade 8 and Reading Grades 4 and 8 the gap is actually stable or widening. Part of this is certainly to do with the fact that there is a strong cultural component to these measures, meaning that the further a student is from the dominant culture (i.e. white, middle-class culture), the less likely their score will reflect their true potential (Ziegler, Vialle & Wimmer, 2013). In a particularly egregious example of this



bias, the norm sample for the Stanford-Binet psychometric assessment did not include minorities until 1972 (Riedl Cross & Dockery, 2014). In recent decades, a lot of effort has been put into making ability measures more culturally neutral or inclusive (Reynolds & Suzuki, 2012), but they remain controversial.

Van Tassel-Baska, Feng & de Brux (2007) also suggest that low-income students perform better in fluid intelligence and nonverbal ability measures than in other domains, with Van Tassel-Baska (2018, p. 69) suggesting that this contributes to an ability in “real-world thinking and problem-solving situations” that is rarely considered in identification measures. While there are tests, like the Naglieri Nonverbal Abilities Test (NNAT; Naglieri, 1997), which claim to better capture the strengths of disadvantaged students (Naglieri & Ford, 2003), many remain unconvinced of their reliability and validity (Lohman, 2005; Riedl Cross & Dockery, 2014). Riedl Cross and Dockery (2014, p. 3) instead suggest using “expanded protocols for identification”, asserting that “intelligence tests remain useful when applied in a thoughtful and transparent manner” but should not be used alone (Riedl Cross & Dockery, 2014, p. 131). One promising avenue for identification is teacher nomination, especially in conjunction with guidance for the teacher as to what they are looking for (McBee, 2006). Harradine, Coleman & Winn (2014) describe one tool dedicated to this purpose, the Teacher’s Observation of Potential in Students. Key to the TOPS is the shift “from an *at-risk* to an *at potential* mindset.” (Harradine, Coleman & Winn, 2014, p. 25)

Another option is giving students more preparation for standardised assessments, in the hope that a few months of targeted instruction will help close the excellence gap observed in such assessments. Project 2011 was a “program offered year round with activities after school, Saturdays, and during the summer. Students received weekly tutoring on Wednesdays for three hours and Saturday mornings for four hours.” (Ebanks et al. 2012, p. 247). The project had considerable success- 27% of students who completed it passed the SHSAT compared to 1-2% of demographically similar students who did not take part (Ebanks et al. 2012). The programme is difficult to generalise, however, as the investment of resources and student time and energy it demands are immense. Overall, then, these approaches promise small, incremental improvements but, much as is the case for interventions for disadvantaged students more generally, are nowhere near capable of solving the problem of underrepresentation on their own.

The question of how big a problem this observed underrepresentation actually is has been the subject of much debate within the field. One side of the spectrum of opinion is articulated by Gagné, who claims that “respect for demonstrated high abilities- a.k.a. talent- makes the disproportions [between different demographics] immune to accusations of inequity”. (Gagné, 2011, p. 14). Within this view, as long as the assessments are accurately measuring what they set out to measure there is no issue with using them. At the opposite end of the spectrum, Ford states that it is “unprofessional and unethical to trivialise, tolerate, accept or permit the inequitable distribution of resources and opportunities to marginalised students” (Ford, 2014, p. 143). For Ford and others like Borland (2005), the issue facing the field is less a technical matter of fine-tuning measurement precision than a moral issue of ensuring equality of opportunity within a deeply unequal social and educational system. This study aligns itself with the latter viewpoint, seeing the under-identification of high ability students from disadvantaged backgrounds as a challenge to the field which goes beyond questions of assessment reliability and validity and demands innovative approaches which adapt the body of knowledge and best practices to the needs of these students. The next section will look at a selection of programmes which have done this successfully in the international context.

## 2.5 Promising Programmes for High Ability Students From Disadvantaged Backgrounds

While there remains much debate over the most effective type of programme for high ability students from disadvantaged backgrounds, there is widespread agreement that contextual factors often determine which are feasible in a given situation. Although in-school programmes have been very successful in many countries, contextual factors rule out a school-based programme in Ireland, with dedicated provision for high ability students neither mandated nor funded by the DES. Neither primary nor secondary school teacher training programmes include any material on high ability students, and there is currently no Continuous Professional Development in-service training available on the subject either. While the DEIS scheme includes a host of initiatives aimed at improving performance among low achievers, there is still nothing aimed at high ability students. There are several more local factors which make an out-of-school approach the better choice for this study, and we shall return to them in the context chapter.

The most suitable type of out-of-school programme is also influenced by contextual factors. While acceleration is a powerful tool which can have academic, social and emotional benefits for children (see for example Colangelo, Assouline & Gross, 2004), it is not always and everywhere suitable. Acceleration approaches which allow students condense curricula into briefer periods or skip entire year grades, in general or in specific subjects, depend on whole-school support and a cultural partiality (or at least impartiality) to the idea of acceleration (Colangelo, Assouline & Gross, 2004), neither of which is present in an Irish context (Cross et al., 2014; Cross et al., 2019). Ledwith (2013) describes a successful acceleration programme for Irish students in which students attend university 1 day a week to take specific university level modules, but the Early University Entrants programme is only open to 15 and 16 year old students for both academic and logistical reasons. There are signs that Ireland is moving towards a less rigid and linear curricular system which might be more conducive to acceleration approaches, particularly at Junior Cycle level (DES, 2015). At the moment, however, an enrichment programme would appear to be better suited to the contours of the Irish system.

Enrichment programmes go beyond the standard curriculum in either breadth or depth of content covered. ‘Vertical’ approaches focus on subjects covered in school, but go much further in terms of detail and complexity, aiming to reach high ability students at the level at which they are capable of working and directly impact their school performance (see for example Olszewski-Kubilius et al., 2017). ‘Horizontal’ approaches, on the other hand, focus on subjects outside the school curriculum, aiming to stimulate high ability students with advanced material in interesting areas and indirectly impact school performance through increased motivation and the transfer of skills (see for example the CTY summer camp model- [CTY, 2019a]). Both approaches have their strengths and weaknesses, and the choice between the two ultimately comes down to what the programme hopes to achieve.

Finally, there is the question of how students will be identified and offered a place on the programme. As discussed in section 2.4, conventional identification methods are not always suitable for use with students from disadvantaged backgrounds. Riedl-Cross & Dockery (2014) support the use of adapted identification techniques for such students, with ability measures being seen as a useful tool but not the only criteria for entry. McBee (2006) suggest that teacher nomination is well suited to the aims of many programmes for

this cohort, as teachers may be uniquely placed to identify those students who will most benefit from such a programme. There is, however, the danger that teachers without training and experience in identifying and working with high ability students from disadvantaged backgrounds will miss signs of high ability among these students because of implicit bias towards more affluent students or rigid, culturally-defined ideas of what high ability is and how it manifests. Harradine et al. (2014) therefore recommend that teachers are given training and clear guidelines to ensure they are nominating the right students.

There is also the question of whether the programme should be open to all high ability students or whether it should only be offered to students identified as being from disadvantaged backgrounds. There are several successful programmes open to all students which include a dedicated access route or subsidised fees for students from under-represented groups, and these programmes report positive academic and social outcomes for such students, as well as benefits to the programme as a whole as a result of the greater diversity of backgrounds, viewpoints and life experiences they bring (Borland, Schnur & Wright, 2000). On the other hand, VanTassel-Baska (2018) notes that students from disadvantaged backgrounds may not be prepared enough academically to jump straight into such a challenging environment, and may benefit from taking part in a homogeneous programme first. Such a programme is an opportunity to encourage students in their strengths and address any areas of weakness which need to be improved upon, though Olszewski-Kubilius & Clarenbach (2012) caution against the harmful effects of ‘deficit-thinking’ inherent in over-emphasising areas of weakness over areas of strength. A scaffolded approach which builds up from relatively straightforward material to complex and challenging aspects of the domain has been found to be particularly effective (VanTassel-Baska, 2018). Homogeneous grouping also eases students into the social side of the programme, by introducing them to other students who are they are more likely to identify with before placing them into a classroom in which they might be surrounded by middle-class students and feel isolated (Healion, 2006). There is a fine balance to be struck in tailoring programmes to suit the students taking part without reifying existing differences between groups or creating new ones.

There is also an ethical dilemma captured by the concept of the ‘Matthew effect’, which describes the tendency of advantage to accumulate. In the field of education, it has been used to explain how interventions (aside from very basic or remedial ones) tend to disproportionately benefit those students who were already the most able (Gagné, 2011).

With regard to heterogeneous groups of highly able students, the Matthew effect has been used to explain how the most able generally get the most out of programmes (Gagné, 2011). While this compound interest on ability will also occur in demographically homogeneous programmes, in heterogeneous programmes it will tend towards further advantaging the socioeconomically advantaged due to the correlation between socioeconomic status and scores on ability measures. As with the cycles of educational disadvantage discussed in section 2.3, cycles of educational *advantage* can have effects throughout an individual's life and on into future generations (Gagné, 2011).

In both homogeneous and heterogeneous programmes funding is another issue which must be considered. The cost of such programmes is generally beyond the means of low-income families, meaning that money has to be found elsewhere to offer subsidised or free places or programmes. At a time of austerity across the EU, the US and much of the world, large-scale public investment in such programmes has stalled or diminished. Universities in Ireland have been hit particularly hard by funding cutbacks, leaving them less money to invest in these projects (Cassells, 2016). NGO and corporate funding might be more readily available, but can also be precarious and may come with strings attached, implicitly or explicitly. The amount of funding needed determines and is determined by feasible sources, shaping decisions about what sort of resources will be available for the programme, what sort of staffing model it will use, how many students it will cater to and other crucial issues (Gallagher, 2015). Funding (in terms of sources, amounts and detailed breakdown of uses) is rarely discussed in detail in the literature, presenting a challenge to those seeking to replicate the findings in other contexts.

Bearing all of these issues in mind, we will now look in detail at a selection of four successful programmes in this area, one school-based homogeneous vertical enrichment programme, one school-based heterogeneous horizontal enrichment programme, one out-of-school homogeneous vertical enrichment programme and one out-of-school heterogeneous horizontal enrichment programme. Each will be examined on their approach to identification, programme design, evaluation and funding. While each programme exists within a very different context to this study, there is much that can be learned from effective strategies elsewhere as long as the strategies are “translated” into the new context rather than simply transplanted.

## 2.5.1 Project Excite- Northwestern University's Centre for Talent Development, Illinois, USA.

### Identification:

Project Excite takes an expansive approach to identification, inviting all third-graders (aged 8-9) from underrepresented minority groups to sit the entry assessment, which consists of the Naglieri Nonverbal Ability Test (NNAT) and the reading and maths subtest of the Iowa Basic Skills Test (Olszewski-Kubilius et al., 2017). Students who score above the 75th percentile on any of the three assessments are eligible to take part in the programme, as well as students who score below the threshold who were recommended by their teachers on the basis of excellent work ethic, school achievement or exceptional interest (Olszewski-Kubilius et al., 2017). Olszewski-Kubilius et al. (2017, p. 24) claim that “most of the students would not have qualified for a typical gifted program that used achievement at the 90th or 95th percentile to qualify”, and that “the average Project Excite student was comparable to the average District 65 student at the beginning of the project”. An estimated 80% of students who took part in the programme between 2000 and 2013 were from low-income families, with the rest drawn from middle-income minority families (Olszewski-Kubilius et al., 2017).

### Programme Design:

Project Excite comprises two phases, the first from 3rd to 8th grade and the second from 9th grade through to graduation (Olszewski-Kubilius et al., 2017). The second phase focuses mainly on college readiness and negotiating the US university admission process, and will not be looked at in detail here. The first phase includes acceleration and enrichment opportunities which run after school, at weekends and over the summer, comprising a total of 445 required and 190 optional contact hours over the six years (Lee, Olszewski-Kubilius and Peternel, 2009). The course focuses on preparing students for “advanced-level math and science coursework in high school”, with students expected to complete Algebra 1 at the very least. As Olszewski-Kubilius et al. (2017, p. 23) note, “all activities supplemented rather than supplanted regular school learning.” This supplementation of school learning speaks to the goal of Project Excite, which is to close achievement gaps in STEM subjects between disadvantaged students and advantaged students.

There is a strong focus on parent involvement in the programme, with regular parent meetings to share information on what students are learning, parent workshops and the formation of a parent group to share experiences and organise activities (Olszewski-Kublilius et al., 2017).

#### Evaluation:

A study of the first 14 years of Project Excite found that the programme “reduced the math and science achievement gap between disadvantaged high-potential minority and high-achieving majority (i.e., White and Asian) students” (Olszewski-Kublilius et al., 2017, p. 41). However, it did not close the gap entirely, with Project Excite students still scoring below non-low-income White and Asian students. In terms of a value-added approach, students taking part in the programme made greater achievement gains across math, reading and science than the district average (Olszewski-Kublilius et al., 2017). In the Explore test, a curriculum-based test used to assess high-school readiness and to determine class placement in high-school, Project Excite students performed comparably to White students, the district’s highest scoring group (Olszewski-Kublilius et al., 2017).

#### Funding:

The programme is free for participating students, but it is not clear how the programme is funded. The scale of the programme makes it clear that a sizable amount of funding is necessary. Resources are not discussed in the studies of the programme, making it difficult to gauge how replicable the programme is in other contexts.

### 2.5.2 Scholars Programme- The Brilliant Club, UK.

#### Identification:

Students are identified by their teachers to take part in the programme, with many schools running a competitive selection process. At least 55% of students nominated to take part must be from the “target group”, which includes students who are eligible for the pupil premium, students with no parental history of higher education in the UK and students who are living in a low-income area.

### Programme Design:

The programme begins with a 'Launch' event in a selective university and is structured around seven tutorials given to students by a PhD student. The tutorials take place within the students' school during the school day and are limited to groups of six per tutorial. Students produce an assignment on the subject and are given personal feedback on it before final submission on the last day of class, and the assignment is graded on a university style scale. This is followed by a graduation event in another selective university.

The programme currently caters for students aged 10 to 18, with students aged 10 to 14 completing pre-designed courses in general areas such as Maths or History and students aged 14 to 18 completing more focussed courses in the tutor's area of speciality.

### Evaluation:

In 2017/18 the programme reached 12,254 students in 714 schools, 78% of whom were from the target group, with many meeting more than one criterion for entry (The Brilliant Club [TBC], 2018). Between 66% and 78% of students achieved a 2:1 or 1st in their final assignment across the various age groups (TBC, 2018). The programme uses a pre-test/post-test approach to gauge student improvements across academic (written communication, subject knowledge and critical thinking) and psychosocial areas (motivation, self-efficacy and metacognition), finding increases in all six in 2017/2018 (TBC, 2019a). An independent evaluation by UCAS found that 'target' students who took part in the Scholars Programme were almost twice as likely to progress to a selective university compared to a demographically matched control group, with 54% of those who completed the programme progressing compared to 30% of the control group (TBC, 2019b).



Funding:

Courses are free to access for all students, but schools must contribute £160 per pupil taking part. The small class sizes mean that staffing costs are relatively high, as does the investment in a thorough recruitment and training process for staff. Situating the classes on school premises during school hours reduces other overheads, though tutor travel costs have been noted as an issue. The Brilliant Club is partnered with universities across the UK, but it is not clear whether they contribute anything to the financial side of the programme or just provide tutors and support. The Brilliant Club also receives sponsorship from the Sutton Trust, a foundation dedicated to improving social mobility in the UK, and from several corporate partners (TBC, 2018, p. 23).

### 2.5.3 CTY Scholars- Johns Hopkins University, Maryland, USA.

Identification:

Students must qualify through scoring above the 95th percentile in the CTY Talent Search assessment, an ability measure based on quantitative and qualitative reasoning ability. After qualification for CTY, there is a separate competitive application process for the Scholars programme. To be eligible, students must be from an underrepresented group (ethnic, linguistic or socioeconomic) and a low-income family, attend 8th grade in a public or charter school and live in specific geographical areas. Where Project Excite identifies large numbers of students and offers them a course to close the achievement gap, the CTY Scholars programme focuses on a much smaller, higher achieving group and offers them opportunities to pursue excellence.

Programme Design:

The scholarship programme lasts four years and includes SAT/ACT preparation workshops, college preparation workshops, two CTY summer courses, one CTY online learning course and two Family Academic Programmes. Students are also assigned an educational advisor for the four years to help them navigate the challenges of high-school and the college application system. The main focus of the scholarship, the two CTY

summer courses, give students a chance to pursue horizontal enrichment courses in a residential programme with a heterogeneous group of students. While the summer courses encourage students to develop their talent within areas of interest, the workshops are more directly linked to progression to third level, giving students the concrete skills they need. As with Project Excite, there is an emphasis on long-term intervention and family involvement.

#### Evaluation:

Since 2004 700 students have taken part in the Scholar's programme (CTY, 2019b). VanTassel-Baska (2007, p. 5) describes "the powerful impact on student's lives and the real-world accomplishments they have achieved" as resulting directly from the "intensive on-going personalised" nature of the programme. This is, therefore, a different approach to the generalised nature of Project Excite, striving for different results. Both are effective programmes, so the choice to model a new programme on one or the other has less to do with empirical data than with key choices around the quantity of students to be taken in and the quality of intervention to be provided, with available resources constraining what can be achieved along these two axes.

#### Funding:

Again, there is little information available about how CTY Scholars is funded. The CTY website notes that the programme is a \$25,000 opportunity (CTY, 2019b), suggesting that a sizable amount of funding is needed per student. As most of the opportunities involve taking part in existing programmes and the number of Scholars per year is relatively low it seems likely that these programmes and their funding model can absorb much of the cost of the Scholar places. The mechanics of how much the programme can be funded by internal sources like this and how much is reliant on external sources like grants and donors are not discussed in any of the literature.

## 2.5.4 Camp Launch- The College of William & Mary's Centre for Gifted Education, Virginia, USA.

### Identification:

Students self-nominate for the programme on the basis of ability (performance above the 90th percentile in a standardised test or a recommendation accompanied by demonstration of excellent performance) *and* background (eligibility for free/reduced school lunches or family income below \$45,000). The camp currently caters to 70-80 students per year (Kim, Cross & Cross, 2017)

### Programme Design:

Camp Launch is a two week residential summer camp where students take vertical enrichment classes based on science and writing curriculum units. Outside of class there is an emphasis on extra-curricular activities in the form of field trips, academic and non-academic activities and structured social time. Camp Launch has four chief goals, aiming to deliver rigorous academic content in class and wider enrichment opportunities outside of class, to encourage the development of peer support networks and to foster aspiration towards attending college.

### Evaluation:

Student learning is measured using pre-post assessments, with strong effect sizes in achievement growth across every class in 2016 (Kim, Cross & Cross, 2017). Students also reported greater confidence and enjoyment in school six months after taking part in the courses, as well as displaying a stronger understanding of the links between planning, effort and reward (Kim, Cross & Cross, 2017). Kim, Cross & Cross (2017, p. 92) also argue that "Camp Launch has been successful in achieving its goal of developing positive peer relationships among campers", a goal which is espoused by all three other programmes discussed but not directly measured in any of their evaluation. The development of positive peer relationships described by Kim, Cross & Cross (2017) include both the formation of lasting friendships with other students at the camp and the growth in student confidence and interest in meeting new people after the camp. The social benefits of Camp Launch reflect Kim's (2016) meta-analysis of enrichment courses, which

suggests that such socioemotional development is as important as academic achievement. Unfortunately, many programmes presume such benefits will take place and thus neglect to measure them in their evaluation process.

#### Funding:

As a two-week residential programme where students do not pay any fee, Camp Launch is a resource intensive programme. Kim, Cross & Cross (2017, p. 94) note that the “program was funded by Jack Kent Cooke Foundation until 2015 and is funded by Petters Family Foundation from 2016 to 2019.” There is no indication of how much funding the camp requires and whether any other sources (eg. the Centre for Gifted Education, the College of William & Mary, etc.) also contributed financially or otherwise.

## 2.6 Educational Transitions

Among the chief concerns in the provision for high ability students from disadvantaged backgrounds are the gaps and holes in the system through which these students may slip during their passage through the education system. As well as the academic and socioemotional gaps discussed in sections 2.3 and 2.4, there are potential institutional gaps in the transitions between the various stages of the education system. Each of these transitions, from the initial entry into pre-primary school to the final graduation from third-level education into the world of work, have their own dangers even while they offer students new opportunities for self-development. This study will focus on the move from primary to post-primary schools, a period of “triple transition” (DCYA, 2014, p. 35) undertaken by students aged eleven to thirteen in Ireland. As well as the institutional transition, there is also a developmental transition as students enter puberty and begin the delicate and difficult journey through adolescence and a social transition as students redefine themselves in relation to others and form new peer groups inside and outside of school (DYCA, 2014).

Smyth, McCoy & Darmody (2004) describe the move to ‘Big School’ as a time of both anxiety and excitement for Irish students and their families, noting that how well a student settles in and how well they cope with the new academic demands in first year “is likely to have long-term implications for their engagement with education.” (Smyth, McCoy &

Darmody, 2004, p. 247). Gutman & Miggely (2000) suggest that disadvantaged students are more likely to be 'at risk' over the course of this transition as old supports and bonds are left behind. Carr (2008) argues that the "primary to post-primary transition is a particularly crucial time for young people from disadvantaged communities when learners can drop out or be made for life." (Carr, 2008, p. 3). Over the course of the transition, "inequalities between families and pupils became magnified" (INTO, 2008, p. 9) due to the nature of the "multi-faceted process that draws upon the resources of students and their families and militates against those who do not have adequate resources in the socio-cultural area" (INTO, 2008, p. 14).

There are a number of institutional elements which contribute to this difference in the experience of the transition. Ward (2000) highlights the importance of the move from the primary school's 'pupil-centred' environment where students spend most or all of their time with a single teacher to the secondary school's teacher-dominated classroom, where students must negotiate the teaching styles and personalities of multiple teachers each day. The shift in emphasis from the "culture of care of the primary school" to the "exam-oriented culture of second-level" further exacerbates the difficulty of the move (INTO, 2008, p. 11). Boys from disadvantaged backgrounds are especially like to struggle with the new dynamic, and this is reflected in their lower levels of achievement, academic self-concept and happiness in secondary school (Smyth, McCoy & Darmody, 2004). Behavioural issues are much more likely to occur in secondary school, and this affects both the individuals involved and the entire classroom (O'Brien, 2008). On the other hand, Smyth, McCoy & Darmody (2004) note that having multiple teachers can have a positive impact as the school day is no longer based around one student-teacher relationship. With regard to the domain specificity of high ability discussed in section 2.2 this may result in a greater chance of a subject teacher identifying a student's ability within that subject.

In terms of academic achievement, more significant performance declines during the transition period are found among the cohort served by this programme than any other (Simmons, Black & Zhou, 1991). Students in the lowest income quintile are more likely to report poor behaviour, display high levels of anxiety and to have Special Educational Needs (SEN), and these risks were especially associated with the concentration of disadvantaged students in a school (Smyth, 2015). Given these issues facing DEIS schools and their students, they can end up dedicating most of their resources to addressing academic difficulties and maintaining discipline, leaving little space to encourage

excellence. As well as this, socioeconomically disadvantaged parents, despite their best intentions, can find themselves ill-equipped to navigate the educational system and deliver effective guidance and academic support to their children (Lareau, 2011; Reay & Ball, 1998).

While there has long been recognition of the difficulties posed by the transition process for students (Smyth, McCoy & Darmody, 2004; Department of Children and Youth Affairs, 2014; INTO, 2008) existing programmes focus almost exclusively on the mechanics of the new institution and how to navigate the maze of this new environment (see for example in-school programmes like those described in INTO, 2008, pp. 92-109). Those programmes that do focus on academic issues tend to emphasise remedying deficits rather than encouraging strengths. Smyth, McCoy & Darmody (2004) identify the transition period as a potential stumbling block for students in the top quintile academically and for students in the bottom socioeconomic quintile. While they do not investigate the issues faced by those in both groups, there is a possibility that the risks will be at least additive and may even be compounded by their circumstances. On the other hand, students' academic strengths may act as a protective factor during the transition, a possibility suggested by Smyth, McCoy & Darmody's (2004) finding that students with higher scores in reading were more likely to enjoy school than students with lower scores.

For high ability students, the main issue is stagnation. Having already mastered primary school material, they nonetheless have to go over much of it again, leading one British study to describe the first year of postprimary schooling as "an academic hiatus" for these students (Hargreaves & Galton, 2002, p. 12). Despite initiatives like the Education Passport designed to share information between primary and postprimary schools, Prendergast et al. (2017) found that 68% of Maths teachers view first years as a blank slate in terms of mathematical knowledge. As boredom and frustration increase, school enjoyment, academic engagement and personal wellbeing can begin to decline (Smyth, 2015). Students who should be thriving on the challenges of postprimary curricula can instead be turned off their new school by a lack of intellectual stimulation. Research by Ireland's Economic and Social Research Institute (ESRI) suggests that this is a problem which takes root in first year and begins to cause serious problems in second year and onwards, potentially disrupting students' preparations for the Junior Certificate examination (Smyth et al, 2006). The adverse effects can snowball as poor performance in this exam can have serious consequences for how students view themselves and their

engagement with education, and for how students are viewed by their school and teachers (Smyth & Calvert, 2011). While negative outcomes of this magnitude are rare and most students adapt well to secondary school by the end of first year, this is still a risk facing all students, and especially students from disadvantaged backgrounds.

High-achieving students also report feeling more anxiety around exam results, with the pressure to do well in the Junior Certificate state examination already felt by students at the start of first year (Smyth McCoy & Darmody, 2004). The structure of the Junior Cycle is in the process of changing, meaning that no work has looked at the experience of transition in the new system. It therefore remains to be seen how this experience will be changed by the structural changes implemented roughly between 2015 and 2020 with an emphasis on continuous assessment rather than high-stakes summative exams, on giving students more time to engage with academic and vocational subjects beyond state exams and on devoting more time and energy to explicitly promoting wellbeing (DES, 2015). Overall, the literature on the transition from primary to secondary school points to it as being a process which can cause issues to students, but which is also a vital part of their academic, social and personal development.

## 2.7 Conclusion

The LEAP programme on which this study is based is an intervention for high ability students from socioeconomically disadvantaged backgrounds as they move from primary to secondary school. In this chapter, the meaning of the terms “high ability” and “socioeconomically disadvantaged” have been explored in order to outline what such a programme should look like and why it is necessary. Ziegler’s (2005) Actiotope model has been chosen as the most suitable conception of high ability, mostly because of its compatibility with the particular needs of students from socioeconomically disadvantaged backgrounds. In particular, the inclusion of the various forms of capital which students have access to within the Actiotope model is productive in considering how to provide for students with little access to such capital. The literature on educational disadvantage, meanwhile, is even more fractious and riven by explicit ideological debate due to the inherently political nature of a phenomenon which is both a result of and a cause of social inequality. This literature offers a deeper look at the idea of educational capital and how it

plays out within our current system. The DEIS scheme's successes in tackling educational inequity show that incremental change is possible, but suggest that there is still room for much more targeted provision, especially for highly able students. Finally, the literature around the transition shows it to be an area where students need support, especially high ability students and students from socioeconomically disadvantaged backgrounds. For an action research project focussed on making a tangible difference in the world, the literature cannot be considered in isolation. The world in which the project will take place is equally important as this context is vital to understanding why a change is needed and will shape what can be done, how it can be done. The next chapter will therefore undertake a full consideration of the educational, economic and institutional context of the LEAP programme.



# Chapter 3: Context

## 3.1 Introduction

The foundational context of this study was the LEAP programme, which I designed and ran specifically for this project. This chapter will begin by describing this context in detail, explaining the structure of the programme and the rationale for key decisions in the design and evolution of this structure over the three cycles covered by this study.

The literature discussed in the previous chapter informed these decisions, but so did the context within which the LEAP programme existed. As an action research project, fully engaging with the day-to-day realities of stakeholders is crucial to this study. These realities exist across multiple scales, from the micro-level of the Centre for Talented Youth, Ireland as an institution right up to the macro-level of the Irish national education system. This chapter will consider this local detail and how it interacts with the academic literature discussed in the previous sections to shape the design of this project. Firstly, the Irish education system which structures students' developmental trajectories has several particularities relevant to the LEAP programme which must be acknowledged. Secondly, the area of North Dublin from which students participating in this programme are drawn is one struggling with concentrated disadvantage. This disadvantage will be described and contextualised by looking at local socioeconomic measures in comparison with the national averages. In recognition of the deprivation on its doorstep, the DCU Access service has made efforts to build meaningful connections between the university and the locality, and these will also be considered. Thirdly, to conclude the discussion of the institutional stakeholders involved, the discussion will turn to CTYI's pre-existing programmes for high-ability students from designated disadvantaged schools in the area and the findings they have generated. Overall the context chapter paints a picture of the world of the study, a world characterised by urgent challenges but also by a growing range of targeted responses. The LEAP programme aims to contribute meaningfully to these efforts.

### 3.2 Lifelong Educational Achievement Partnership Programme

As stated and briefly discussed in section 1.2, the LEAP programme is an out-of-school enrichment programme for high ability students attending DEIS schools linked to DCU which I constructed, coordinated and developed over three cycles within this study. The LEAP programme builds on the CTYI's two existing programmes for high ability students- the CAA programme for primary school students (see section 3.5.3.1) and the Aiming High scheme for secondary school students (see section 3.5.3.1). The two crucial features which set the LEAP programme apart from existing CTYI programmes are the depth of the commitment it gives to students and its situation at the transition from primary to secondary school. The LEAP programme was partially inspired by the many participants in both Breslin's (2016) study on the Aiming High scheme and Healion's (2013) study on the CAA programme who noted that they wished the courses they were taking were longer, and stated that they would love to attend more of them. Where these two programmes both offer students a chance to take a course once a year, the LEAP programme now comprises four terms over a fifteen month period. Students who take part in the CAA programme in 6th class, continue onto the LEAP programme and who go on to take part in the Aiming High programme in the summer of first year can therefore partake in six terms over a two year period. The classes themselves draw on CTYI's extensive experience of running stimulating and enjoyable classes, with LEAP classes providing the same level of instruction and challenge as any other CTYI class. The results of this study show that the high academic quality of the classes was central to students' experiences of the programme but the social atmosphere of the classroom was also key (see section 5.2) . The variety of classes taken played a large role in this positive impact, and this variety was only possible within an extended programme.

Transitions were also crucial to the organisation of the LEAP programme- both the transition from primary to secondary school and the transition from CTYI primary school programmes to CTYI secondary school programmes. As the CAA programme is run through DCU-linked primary schools and the Aiming High programme through DCU-linked secondary schools, there was no clear bridge between the two programmes for students who took part in primary school and wished to continue taking part in secondary school. As well as creating a pathway for students to continue with CTYI over their transition from primary school to secondary school programmes, the transition from primary school to secondary school itself was targeted as a period of potential difficulty for

students. As discussed in section 2.6, all students face challenges as they move up to “the big school”, but the students taking part in the LEAP programme are a particularly vulnerable group. Transition programmes within the target secondary schools tend to focus on the logistics and atmosphere of the new institution whereas the LEAP programme is dedicated to providing a suitable level of academic challenge and stimulation to students outside of their school environments. However students experience the transition *within* school, a positive experience of a second educational environment - linked to but separate from their everyday school environment - may help them cope with the boredom and frustration many students describe experiencing in their first year of secondary school (Hargreaves & Galton, 2002).

Finally, the LEAP programme was developed using Ziegler’s (2005) Actiotope model of high ability (as outlined in section 2.2.4) as a theoretical framework. This model was chosen due to its systemic and dynamic conception of what high ability looks like and its focus on achieving a stable trajectory for each individual student’s growth. In particular, the importance of considering students’ wider environment and previous educational experiences in understanding their present level of ability shaped the identification process of the programme, as outlined in section 3.2.1 below. The construction of the programme was also shaped by the Actiotope model and particularly by the learning and educational capitals it describes (see Table 3.1 below). Overall, the goals of the programme were focused on contributing to students’ action repertoire by teaching them effective actions in a range of fields, building their motivation to learn by providing them with a range of positive educational experiences and promoting their healthy academic development by encouraging a dynamic equilibrium- growth at the right level of challenge and at the right pace.

**Table 3.1 Educational and Learning Capitals & the LEAP Programme.**

<b>Capital</b>	<b>Definition (from Ziegler et al., 2017, p. 313)</b>	<b>Place in LEAP Programme</b>
Economic Educational Capital	Every kind of wealth, possession, money, or valuable that can be invested in the initiation and maintenance of educational and learning processes.	Students' lack of economic capital was crucial to designing this programme, but the programme could not directly address economic capital.
Cultural Educational Capital	Value systems, thinking patterns, models and the like that can facilitate- or hinder- the attainment of learning and educational goals.	Cultural capital was built indirectly by students as they engaged with different domains in each class.
Social Educational Capital	All persons and social institutions that can directly or indirectly contribute to the success of learning and educational processes.	Social capital was built through students' link with CTYI (and to a lesser extent DCU) as well as through the relationships they built with each other.
Infrastructural Educational Capital	Materially implemented possibilities for action that permit learning and education to take place.	The LEAP programme allowed students to make use of some of DCU's substantial infrastructural capital.
Didactic Educational Capital	The assembled know-how involved in the design and improvement of educational and learning processes.	The LEAP programme made use of CTYI's substantial didactic educational capital to offer the most effective possible learning experiences.
Organismic Learning Capital	The physiological and constitutional resources of a person.	While students with low organismic learning capital could not build it on the programme, classes were designed and run so as to minimise the negative impact health difficulties or special educational needs had on student learning.
Attentional Learning Capital	The quantitative and qualitative attentional resources that a person can apply to learning.	The LEAP programme was a context where students had time to put their focused attention to use in learning.
Telic Learning Capital	The totality of a person's anticipated goal states that offer possibilities for satisfying a person's needs.	The LEAP programme sought to inspire and inform student motivation in the short-term through providing them with academic challenges to master and in the long-term by giving them an insight into third-level education.
Actional Learning Capital	The action repertoire of a person- the totality of actions they are capable of performing.	Each course on the LEAP programme built students' action repertoires as they learned to perform new actions in a range of domains.
Episodic Learning Capital	The simultaneous goal- and situation-relevant action patterns that are accessible to a person.	LEAP classes were focused on practically applying knowledge rather than simply learning theory, and thus encouraged students to develop action patterns relevant to the domain they were studying and to other contexts.

### 3.2.1 Identification

As discussed in section 2.2 and section 2.4., the identification of high ability students is a difficult process, and the identification of high ability students from socioeconomically disadvantaged backgrounds is more challenging still. While identification for CTYI's mainstream primary school programme (see section 3.5) is through a group-administered formal assessment of abstract, verbal and numerical ability, it was felt that this approach was too rigid for the type of programme the LEAP wished to build. The programme instead uses teacher nomination for two main reasons. Firstly, teachers in DEIS schools are often better placed to identify ability in students than formal instruments designed for and calibrated on a mainstream idea of what ability is and how it manifests in students. Teachers are not perfect identifiers of ability, and there will still be false negatives (students who should be put forward but are not) and false positives (students who should not be put forward but are), but it was felt that they would be more effective than other available instruments.

Secondly, teachers are able to nominate based on relative ability within a student's school context where other instruments give a far less localised measure of ability. As discussed in section 2.2, for the purposes of the LEAP programme (as well as this study), ability is conceptualised as a function of the interaction between a student's innate potential and their experience of their environment. Evaluating students on the basis of their school-level environment is described as a suitable approach for marginalised groups by other theorists and practitioners (Cross & Dockery, 2014), and has so far been successful within this study.

The LEAP programme's aim of enabling students to transition into the CTYI secondary school summer programmes lead to a second identification process taking place within the LEAP programme. While participating in the programme, students could sit the Talent Search assessment free of charge (the usual fee is €55). This assessment qualified them to attend a secondary school programme with a scholarship covering most of the fees. This scholarship (the Aiming High scheme), the programmes and the Talent Search are discussed in detail in section 3.5.3.2.

### 3.2.2 Programme Structure

As an action research project which developed substantially over three cycles, there were significant differences between the original structure of the LEAP programme and the form it took in the most recent cycle considered in this study. The rationale for this evolution will be explored more deeply in the research design chapter as the changes were a natural and necessary part of the methodological approach guiding this study. In this section, we will look at the LEAP programme over each of the three cycles this study focussed on- 2016-2017, 2017-2018 and 2018-2019. Those aspects of the programme which have remained the same throughout the period of the study will be described only in the 2016-2017 section, with the following sections showing only alterations made in subsequent years. For maximum clarity, a summary of the structure of the three cycles is represented visually in Figure 3.1.



Figure 3.1 LEAP Programme Structure, 2016-2019.

2016-2017

#### Summer Term (2016):

The initial cycle of the LEAP programme started with a week long summer course where students were offered the choice between a “Maths Magic” course and a “World of Words”

course. The focus within each class was on developing high level literacy or numeracy skills, as well as showing the practical applications of the seemingly abstract worlds of maths and writing. The instructors were both experienced educators who had delivered courses for CTYI before. The curricula were developed collaboratively between myself and each instructor to best utilise their knowledge of their fields and pedagogical experience and my knowledge and experience in the provision of programmes for high ability students from socioeconomically disadvantaged backgrounds. All CTYI courses are designed by the instructor with guidance and advice from full-time staff, the instructor's experience in the field being tempered and honed into a suitable curriculum by the CTYI academic staff's' experience in providing programmes to students within specific age groups and ability profiles. The LEAP programme went beyond this with a more deliberately and deliberately co-operative approach. There was a strong emphasis on the importance of a positive and welcoming classroom atmosphere, one based on a growth mindset as described by Carol Dweck (2006). While a positive classroom atmosphere is obviously the goal in any CTYI class, the fact that the LEAP programme is attended by a potentially vulnerable group of students with slightly different needs from the wider population of high ability students made a more tailored approach necessary. The course finished with a graduation ceremony for all students which parents were invited to attend to celebrate the students' achievement in completing the course.

#### **Autumn Term (2016):**

The 2016-2017 autumn term consisted of one day workshops in September and October followed by students sitting the Talent Search assessment in November. The first of these workshops was on "Game-Based Learning", and featured several different games which could be used for educational purposes. These games included word games, strategic team games and one spatial reasoning-based computer game, Kerbal Space Program. Each game was followed by a discussion of whether the students enjoyed the game and whether they thought it might be useful to develop skills in the future, as well as an individual reflection on how well the game was suited to their own strengths and weaknesses. The games were chosen both for their potential contribution to students' learning but also for their social aspect- generally a mixture of co-operation and (friendly) competition.

The second workshop was titled "Personality & Abilities Discovery Day", and built on the discussion of student strengths from the first workshop. As well as fun activities like "Hogwarts House-Sorting", students were introduced to the CTYI Talent Search

assessment format, and completed some practice questions as a group. Tactics for dealing with how the assessment is structured and how questions were asked were discussed, along with ways students could continue to prepare at home if they wished. The goal of this part of the workshop was to familiarise students with the Talent Search style rather than comprehensively “prepare” them for it- as discussed in section 2.4, such preparation requires an incredibly large time commitment from programme providers and students themselves, a commitment which was not felt to be appropriate in the case of a much lower-stakes exam like the Talent Search. Instead, the goal was to impart as much practical knowledge of how to approach the test as possible in a brief workshop, without making students anxious about the prospect of sitting the Talent Search or giving them the impression that their performance on the Talent Search would determine whether they could stay on the programme or not. Finally, in November students sat the Talent Search assessment.

### **Spring Term (2017):**

Rather than continue with the autumn approach of offering a series of individual workshops, in the spring term students took a single course over six weeks. This change was a result of feedback from students and parents about the Autumn term. There was near unanimous agreement that a term of classes was a better option than a series of workshops, and subsequent feedback confirmed that the term was a more successful arrangement.

### **LEAP Graduation (2017):**

To celebrate students’ completion of the LEAP programme and their qualification for CTYI/CAT/Summer Scholars secondary school summer programmes, students and their parents were invited to a graduation ceremony in DCU in May. While each term of the LEAP programme finished with a miniature, in-class, graduation ceremony for students and parents, the May ceremony broadly stuck to the structure of a third-level graduation and also aspired to the same gravitas- students were addressed by the Director of CTYI, Dr. Colm O’Reilly, by DCU President Prof. Briain McCraith and by the guest speaker, then Minister for Social Protection and current Taoiseach Leo Varadkar, before being presented with a certificate recognising their achievement. This ceremony was a formal graduation from the LEAP programme, and sought to show that CTYI, DCU, students’ families and the wider community recognised the effort students put into the programme and believed in their potential to achieve.



After the graduation students were eligible to apply for the secondary school programme which they qualified for in the Talent Search under the Aiming High scholarship scheme, paying subsidised rates (see section 3.4.3.2). The first such course they could attend was in the summer of 2017, and they remain eligible to attend with the scholarship throughout their time in secondary school.

2017-2018:

**Spring Term (2017):**

One of the changes made for the second cycle of the LEAP programme was to start with a term of six classes running concurrently with the 1st cycle classes in the spring of 2017. This expansion of the programme was aimed at building even further on the long term commitment offered to students.

**July Term (2017):**

As with the July course in 2016.

**Autumn Term (2017):**

The workshop-based model was replaced with a six week term of classes, similar to the classes run in the Spring term. The Talent Search preparation which students took part in during a workshop in the autumn 2016 term was delivered to students within the class time of the autumn term in 2017, with the content further developed based on feedback from and observations of the 2016 class.

**Spring Term & LEAP Graduation (2018):**

As with the spring term and graduation for the 1st cycle of the programme in 2017.

2018-2019

The programme structure in 2018-2019 mirrored the 2017-2018 structure with two minor changes. In the July term, instead of choosing between “World of Words” and “Maths Magic”, students took both classes for an hour and a half each. The reasoning behind this change was initially logistical but it proved popular with students. The second change was to the Spring term (2019): students in the 2018-2019 cycle were mixed in with students

from the 2019-2020 cycle for classes rather than each group being offered separate classes. This gave students in each group four classes to choose from rather than two.

During its final cycle, the LEAP programme offered students the chance to take part in four terms over the course of fifteen months. While this was a significant engagement for an academic enrichment programme, it pales in comparison to the time students spend in school. This school context therefore has important ramifications for the LEAP programme and students' experience of it. These ramifications will be teased out in the next section.

### 3.3 The Irish Education System

The national education system is the overarching structure mediating Irish students' academic, social and personal development and, in many ways, shaping their life outcomes. While it shares many similarities with other European systems, there are also some key areas where Ireland stands out in ways important to this study. In this section we will consider the three most important of these areas with regard to provision for high ability students; the ethos of egalitarianism within the system, the rigidity of the system and the nature of the Leaving Certificate, the high stakes test which determines students' progression to third-level.

#### 3.3.1 Egalitarianism

Perhaps the most salient aspect of the Irish education system for this study is its culture of egalitarianism, something O'Reilly (2015, p. 14) has described as a reflection of Irish culture more generally. The Irish economic system is constantly working out the tension between what Kenworthy (2004) describes as "egalitarian capitalism", characterised by a strong welfare state and redistributive approaches to inequality, and a more unfettered capitalism marked by unequal accumulation of wealth and conspicuous consumption-Ireland's "gross market income inequality is the worst of all members of the OECD" (O'Connor & Staunton, 2015, p. 8). Ireland's Gini Coefficient is slightly lower than (i.e. more equal than) the OECD average as of 2015, with the large difference between Ireland's pre-tax and post-tax coefficients (the largest such difference among OECD countries) showing a willingness to pursue redistributive fiscal policy to reduce gross income inequality (OECD, 2017). The state similarly intervenes in the education sector, with policies committing to providing "additional targeted services and income supports to

give ‘at risk’ or vulnerable children and young people the extra help they need to keep up with their peers and lift more children out of poverty, aiming to break the cycle of intergenerational disadvantage” (DCY, 2014, p. ix), and initiatives like the DEIS scheme putting resources behind the rhetoric.

Yet when it comes to progression to third level, and especially to admission to the highest ranked Irish universities, massive inequality remains: “students in the most affluent parts of Dublin are up to 14 times more likely to progress to university than their counterparts from some schools in the city’s most disadvantaged areas.” (O’Brien, 2019). Overall, the drive for equality of opportunity in the Irish education system has manifested itself in piecemeal reforms and targeted interventions rather than radical overhauls (Smyth & McCoy, 2009). With no signs of popular appetite for the latter, the LEAP programme is operating within the structures of the former, attempting to build incrementally towards a more equal Ireland. As a result of the egalitarianism of the Irish educational system, the translation of high ability programming into an Irish context must emphasise certain aspects of the field over others.

Historically speaking, there has been no “Sputnik moment” or Marland Report for the Irish system (see section 2.2.1), no point at which the government launched a concerted drive to improve educational attainment among the brightest students. Instead, the modernising government of the 1960s aimed at reaching a high standard for all students to fashion them into the engine of Irish prosperity (Walsh, 2016). The curriculum’s goal moved away from the insular Gaelicisation which had dominated since the foundation of the Irish Free State in 1922 and towards preparing students to compete in the international market, a shift in values from cultural nation-building to material nation-building which Walsh (2016) argues has remained the dominant paradigm since.

The introduction of universal free second-level schooling in 1967 transformed the system almost overnight: rather than the majority of students ending their education after primary level, most students began going on to complete some or all of a secondary school education (Walsh, 2009). Today, Ireland has one of the highest school completion rates in the world, with 91.2% of the 2010 entry cohort going on to sit their Leaving Certificate (DES, 2017). The other educational upheaval was the abolition of third-level fees in 1996, which opened the door to much wider third-level attendance, though it is worth noting again, that this expansion of access to third-level disproportionately benefited middle- and upper-class students (Denny, 2010). The major shifts within the education system since

then have seen (worthwhile if variably successful) projects attempting to tackle educational disadvantage (see section 2.3.4) and attempts to provide an appropriate education for children with special educational needs (MacGiolla Phádraig, 2007), but very little to challenge students whose capabilities go beyond the curriculum.

Egalitarian ideals have been used to explain the performance of Irish students in international assessments, where the average Irish student ranks very highly but the highest Irish achievers score below most of their European counterparts (Schleicher, 2019; OECD, 2018). In an international context, however, Condrón (2011, p. 50) has found that “more egalitarian countries have *higher* percentages of highly skilled students than do less egalitarian countries.” Condrón (2011) suggests multiple reasons for this, from the general advantages to society which are associated with low inequality (see for example Pickett & Wilkinson [2015] on the effect of greater inequality on health outcomes) to the fact that more opportunities are offered to more students in a more equal education system. The most important finding arising from his study, though, is that “egalitarianism and educational excellence appear to be compatible goals.” (Condrón, 2011, p. 50). In order for these goals to be reached within an Irish context, I would argue, any intervention aiming to promote educational excellence must be deeply steeped in an egalitarian worldview. The ethos underpinning the LEAP programme is driven by a desire to promote both excellence and equality by providing a high quality educational programme to challenge students whose needs on this front are not being met in school.

### 3.3.1.1 Egalitarianism and High Ability Provision Within the Irish Education System

Given the system’s lean towards ensuring an acceptable (if modest) outcome for all students rather than offering an individually appropriate level of challenge to each, there has been no appetite for in-school programmes dedicated solely to high ability students. While it is by now a cliché to point to Finland’s education system as offering answers to problems in other parts of the world, the Finnish model of individualised education within each mainstream classroom has had excellent results across the ability spectrum (Sahlberg, 2014), and would seem more suited to the Irish egalitarian mindset. Indeed, successive educational curricula from the 1970s on have called for individualised learning (Walsh, 2016) in the classroom, but as Sugrue (2002, p. 25) notes “when data on actual practice are

isolated from these studies teachers seem to endorse a child-centred rhetoric while practising a more formal pedagogical style”. Walsh (2016) suggests that the gap between rhetoric and practice is a result of the top-down imposition of this new curriculum without adequate consideration of teachers’ current practices, capabilities and beliefs. Crucial funding and support for the implementation of a more constructivist, child-centred system has also been missing in the past - Ireland ranks 18th of 33 OECD countries for primary and secondary per capita spending, and 17th out of 31 countries for primary through tertiary per capita spending (DES, 2018). This lack of material commitment to educational promises has been particularly evident in the education system’s approach to high ability students.

The distinct needs of high ability students have been recognised in legislation like the 1998 Education Act and formal documents like the National Council for Curriculum and Assessment (NCCA) (2007) *Exceptionally Able Students: Draft Guidelines for Teachers*, but these words have never been translated into official action. The Education Act (1998) both implicitly guaranteed provision for highly able students by committing schools to providing “education to students which is appropriate to their abilities and needs” and explicitly included “the educational needs of exceptionally able students” within its definition of special educational needs which had to be met. While other special educational needs have been met with varying levels of success (MacGiolla Phádraig, 2007), there has been no attempt to tackle the issues facing high ability students by similar means (i.e. resource hours, tailored curricula, pull-out classes etc.). The NCCA’s (2007) *Exceptionally Able Students Draft Guidelines for Teachers*, meanwhile is a thorough introduction to working with high ability students, but suffers from the basic flaw observed by Walsh (2016) above: the imposition of new practices from the central bureaucracy without sufficient training or support for teachers in the classroom. Without accompanying Continuing Professional Development courses and resources the draft guidelines almost inevitably fell into the gap between discourse and action. More easily molded new teachers, meanwhile, still do not receive any pre-service instruction on catering to high ability students. The absence of such instruction in a training programme with a strong emphasis on inclusion and child-centred education further reinforces the conception that meeting the needs of high ability students is not an essential component of an equal education system but an optional, and possibly elitist, extra.

Without significant teacher training (both in- and pre-service) and dedicated funding, then, in-school and specifically in-class provision for high ability students is not feasible in the near future. Moreover, these investments will only be made if the provision is shown to be aligned with the values of the system as a whole. The LEAP programme is, I believe, another step in this direction.

### 3.3.2 Rigidity Within the Irish System

Another hallmark of the Irish education system is a certain rigidity with regard to how students are expected to progress through their school years. While this is common to many European education systems, in Ireland there is almost no flexibility in terms of grade-skipping, even for individual subjects. In primary school, students are kept within their age grade for all subjects, with schools very reluctant to allow anyone advance out of their age grade regardless of how little they are challenged (Ledwith, 2013). In secondary school, age-grades are even more fixed, and curricula focus exclusively around state examinations. The first three years of secondary school are spent preparing for the first state examination students take, the Junior Certificate. While Junior Certificate examination subjects are mostly divided into a higher and an ordinary level curriculum, there is no facility for students who are not challenged by the Higher Level curriculum to tackle more complex work. The Junior Certificate has been criticised for encouraging rote learning of pre-formed answers rather than giving students the tools and the incentive to master topics and subjects, an approach which is likely to alienate high ability students based on findings from other countries (Reis & McCoach, 2000). While performance on the Junior Certificate does not shape students' futures in the way that their Leaving Certificate results do, it does have an impact on whether they will be able to continue taking Higher Level classes into senior cycle and on their academic self-concept (Smyth & Calvert, 2011).

A new Junior Cycle programme was introduced to pilot schools in 2015 and is currently in the process of being implemented nationwide. It hopes to alleviate some of these issues by making the curriculum less centred around a final exam and more grounded in problem-solving and continuous assessment. Until it is fully implemented (and most likely for a significant period afterwards as teachers, students and families adapt), exams remain the primary focus within the classroom, leaving students who have mastered the Junior Certificate curriculum without anything more complex or challenging (or interesting, or

enjoyable) to turn to. The rigidity of the system makes an in-school remedy to this problem unlikely; there is no pathway for acceleration within the system, and devoting scant resources to enrichment work beyond the curriculum and outside of the state examinations is conceived of as a frivolity in a system overtly preoccupied with these examinations. While DES publications and teacher statements alike assert that the state examinations, especially the Junior Certificate, are not the be-all and end-all of the education system, studies of student experiences suggest that they do not feel this way (Smyth, McCoy & Darmody, 2004).

In light of this, deciding on the relationship between an out-of-school programme and the school curriculum is a difficult but vital question. The decision ultimately hinges on the question of what education is and what it should aim for, and a satisfactory approach must balance the values, beliefs and desires of all stakeholders.

### 3.3.3 The Leaving Certificate

Looming over a student's entire experience of the Irish education system, especially as students advance into senior cycle (the final two years of secondary school), is the Leaving Certificate, a high stakes exam taken at the end of a student's final year of secondary school. University place allocation within Ireland is handled by the Central Admissions Office (CAO) and determined almost entirely by a student's *points*, or their total score in their Leaving Certificate. The CAO matches students to courses purely according to supply and demand, ranking students by their points and offering places down the list until the course is full. While this system is fair and objective in terms of offering every student an equal opportunity, it has been criticised for putting excessive pressure on students, especially as the vast majority of the grades students receive are decided by their performance on a single paper or pair of papers in each subject, all taken over a three week period at the end of their final year in school. Much like the Junior Certificate, the Leaving Certificate has also been criticised for rewarding rote learning rather than genuine engagement and comprehension. As the stakes are so much higher, so too is the temptation among teachers and students to fall back on "safe" approaches which maximise results rather than pushing for genuine engagement which would maximise learning in a deeper sense. There has been no research as of yet on how high ability students specifically fare on the Leaving Certificate, but findings around underachievement and its causes among

high ability students elsewhere seem likely to be reflected in an Irish context (Reis & McCoach, 2000).

Perhaps the most important aspect of the Leaving Certificate in relation to high ability students is its emphasis on breadth of knowledge rather than depth of knowledge. Students' points are based on their scores in six subjects, with most students taking seven or eight examination subjects and counting results from their best six. Students must take English, Mathematics and Irish, with a modern language required by many universities to secure admission. Some third-level courses require students to have taken specific courses to be eligible but many do not. While there is a bonus for taking Higher Level Mathematics, all other subjects are worth equal points regardless of their relevance to the university course being applied for. A student applying for an Engineering course at third level can score extremely highly in Mathematics, Physics and Chemistry and find themselves falling short of the points required due to their scores in English and Irish.

Given the trend towards specialisation noted in the high ability literature (see section 2.2), this generalist approach presents a challenge to how we conceive of the purpose and direction of education. Coupled with the fact that students effectively cannot be accelerated beyond their age grade in school, it is difficult to reconcile the broader Irish education system with an approach like the talent development model (see section 2.2.3). Instead of beginning the process of specialisation in earnest early on in secondary school, Irish students effectively defer it until the start of third level. Even the Actiotope model (see section 2.2.4) requires slight modification to "fit" the Irish context: rather than focussing on building an excellent action repertoire within a single domain students may be better off acquiring a lower degree of mastery across a number of distinct domains. While this does impede students' development within each individual field, it also gives them more time to decide which field is best suited to their talents and interests, as well as potentially providing a foundation for interdisciplinary expertise later in their developmental trajectory. The tension between holding back students who know how they wish to specialise and giving time to decide to students who do not is another one which must be balanced within any programme for Irish high ability students.

In sum, an in-school project does not seem currently feasible, but an effective out-of-school programme built on egalitarian principles of equal access to opportunity is well-positioned to receive buy-in from school-based stakeholders. Enrichment rather than



acceleration appears to be a better match with the existing structures, working as a complement to the formal education system and showing students that there is a world beyond state examinations and utterly instrumental learning. The LEAP programme was therefore designed as a complementary educational experience for students who spend most of their school lives in mainstream classrooms, providing classes moving at a pace which these classrooms cannot match, in subjects these classrooms do not offer and underpinned by an educational philosophy these classrooms do not (or will not, or cannot) subscribe to. In other words, the programme is, in many ways, defined against the mainstream classroom. Yet, the LEAP programme is only able to exist in the form that it does because of the existence in the background of the mainstream system - classes can move at a faster pace only because students attending the programme are a select group identified for their ability who all wish to be there, subjects beyond the curriculum can be offered without issue largely because the curriculum is covered elsewhere, and the anti-high stakes assessment philosophy of the programme could be seen as a luxury afforded to it by the existence of the Leaving Certificate to carry out the reconciliation of the supply of college courses to the demand from students.

The relationship between the LEAP programme and the mainstream system is, therefore, mutually beneficial, symbiotic even. The DES benefits from the existence of the LEAP programme insofar as the education of students participating on the programme is their overall responsibility, and the programme fulfills certain commitments made to students in legislation (specifically the provisions of the 1998 Education Act) and policy documents (most notably NCCA [2007]) which, in general, the mainstream classroom currently neglects. Any benefits to the students' educational trajectory in the form of greater academic achievement, increased motivation to attend third-level and improved wellbeing will also redound to the advantage of the education system. In the longer run, these benefits may accrue to the wider state apparatus of which the DES is just one arm - the financial benefits to the state of increased educational achievement among its citizens are deep and widespread (for example, see McMahon [2009] on the individual and social benefits of higher levels of education). Beyond this purely fiscal conception of the good of the nation, less materially-minded thinkers on education from the ancient Greek philosophers to modern progressive theorists have argued for the less tangible benefits of a well educated citizenry (see Brooke & Frazer [2013] for a selection of some of the most influential of these theorists and their conceptions of the role and goal of education). The final sense in which there is a link between the DES and the LEAP programme is on the

level of pedagogical practice. The LEAP programme is deeply embedded within the Irish educational context, a context to which it also brings novel perspectives on and approaches to education. One long-term aspiration of this study and of the LEAP programme in general is to offer a model of educational practice which may influence the system as a whole to incorporate elements of the programme into the mainstream classroom. This long-term aim, however, is less central to this study than the more immediate goal of providing for students in the area surrounding DCU, students who are particularly in need of such provision.

### 3.4 North Dublin Local Area

Action research begins from an observed problem in the world, in this case the educational disadvantage experienced by high ability students attending DEIS schools in the area around DCU. This educational disadvantage is starkly reflected in the concentration of DEIS schools in the area, as well as the educational outcomes recorded within these areas. While the national rate of progression to third level in 2011-2012 was 51.5% and the Dublin total rate was 47%, the postcodes in which these schools are located had rates as low as 28% in Dublin 11 and 15% in Dublin 17 (HEA, 2015, p. 44). Of course, this educational disadvantage is a direct result of, as well as a long-term contributor to, the wider socioeconomic disadvantage affecting the area. Pobal's (2019) Deprivation Indices, based on 2016 Census data, shows data on deprivation down to the "Small Area" (roughly 100 households) level, using factors like demographic information, education levels and work intensity to calculate an area's "deprivation score" relative to the national average, set as the zero point of the deprivation scale (Haase & Pratschke, 2017). Areas with scores of -10 to -20 are described as disadvantaged; there is one particular Small Area within the Whitehall A Electoral Division (ED) with a deprivation score of -39.25 (Pobal, 2019). This area, SA 268157011, within a five minute walk from the CTYI office on DCU campus and within the catchment area of at least one DCU-linked DEIS school, has the most disadvantaged deprivation score in the whole Dublin area, with notably low levels of educational attainment: 60% of residents have primary school education only and just 3.64% have a third level education - and high unemployment: 40% among men and 50% among women (Pobal, 2019). While this SA is an outlier, zooming out to the ED level shows a large number of areas described as "disadvantaged" and "marginally below average" to the north of DCU, with a small number of "very disadvantaged" areas in the

middle of pockets of disadvantage (Pobal, 2019). There is also a significant and growing number of “marginally above average areas” compared to 2011 and 2006 census data, though it is impossible to say from this data whether this upturn is the result of improved material conditions for long-term residents or of increased numbers of new residents occupying new developments (Pobal, 2019).

There have been many major programmes and minor initiatives attempting to tackle the issues facing these areas going back decades, whether as part of a wider national project like the DEIS scheme (see section 2.3.4) or as a specific local movement like youngballymun (2019). The LEAP programme aims to build on the work which has been done and is being done in the area. The most relevant such initiative for this study is that of the DCU Access service, Ireland’s “largest and very first university Access Programme” (DCU Access, 2019). Since 1989, the Access service has supported students experiencing various (and often overlapping) forms of educational disadvantage in gaining admission to and graduating from a university degree, with a special emphasis on “Students residing in North Dublin in communities with low progression to third level education” (DCU Access, 2019). The DCU Access service operates within the wider framework of the National Access Plan (HEA, 2015, p. 6), which aims to “ensure that the student body entering, participating in and completing higher education at all levels reflects the diversity and social mix of Ireland’s population.”

As well as working with individual students as they apply to and enter DCU, the Access service has forged links with both primary and secondary schools across the region and runs outreach events focussed on welcoming students to the campus and celebrating academic achievement. The LEAP programme and the other CTYI programmes described below are run in conjunction with the DCU Access service, with the Access service acting as an intermediary between CTYI and the DEIS primary and secondary schools involved and the schools in turn approaching parents and students. Without these links, even reaching parents and students with information about the courses would be very difficult. A closer look at CTYI and its history of providing programmes for high ability students from these DEIS schools will round out this review of the institutional stakeholders of the project.

### 3.5 The Centre for Talented Youth, Ireland

CTYI is the institution through which this project is being coordinated, meaning that its values and practices are a central shaping force in the design of the study. It should also be noted that CTYI is funding this project (for a deeper discussion of this see section 4.4). Modelled on the Centre for Talented Youth in John Hopkins University (see section 2.2.2), CTYI runs a variety of acceleration and enrichment courses in DCU and other third-level institutions around the country for children aged 6-17. CTYI has been running programmes since 1992, and as such has considerable practical experience within the field.

#### 3.5.1 Research

CTYI also houses the Centre for Gifted Research, which has produced four doctoral theses over the course of the last decade. Two of these studies, Healion's (2013) *Perceived effects of an academic enrichment programme for potentially gifted students from a socio-economic disadvantaged area using critical action research* and Breslin's (2016) *Exploring the experience of high-ability students from socio-economic disadvantaged schools participating in a summer academic programme* focus on programmes for high ability students from socioeconomically disadvantaged backgrounds, and are built on strong links between CTYI, the DCU Access service and the schools themselves. The other two theses, O'Reilly's (2010) *In search of excellence: perceived effects of special classes for gifted students in Ireland from the perspective of participating students and their parents* and Ledwith's (2013) *A case study investigation into the performance of gifted, transition year students participating in a dual enrolment programme* focus on different areas within the field of high ability studies. Overall, this commitment to research has created a substantial amount of expertise within CTYI on various forms of programme design for high ability students, as well as a culture of practice informed by, and contributing to, research in the field of high ability education. Coupled with the logistical framework CTYI provided this study in terms of running the LEAP programme, decisions have been made on both the research and practical side of this programme which did not seem like decisions at all but a "natural part" of how things should run. While I have striven to adhere to, and at times advance, best practice at all times in this study, it must be recognised that aspects of this best practice are very specific to the context of CTYI as an institution and may not be necessary, suitable or even possible elsewhere.

### 3.5.2 Funding

As a department within DCU, CTYI has always received strong support from the university community, although it is financially self-funding. In the early 2000s CTYI received modest government funding, but this was stopped in 2008 during the post-financial crisis austerity period and has not been renewed since the economic recovery began. As a result, the programme is funded mostly by fees charged for taking part in assessments and courses, which can be prohibitively expensive for some potential students. Financial aid is available to cover some of the costs of courses, and schools or charitable organisations fund a small number of students' participation. Overall, though, it is fair to say that the socioeconomic makeup of CTYI students does not mirror the socioeconomic makeup of Ireland as a whole. The respondents to a parent survey conducted by CTYI (Cross et al., 2019) had a median household income in the €80,000-€99,000 bracket, well above the national median figure of €45,000. (CSO, 2018). In recognition of this fact, CTYI has been running targeted programmes and dedicated courses and scholarships for students attending the DEIS schools linked to the DCU Access service since 2006, and these programmes were vital contextual factors in the development of the LEAP programme.

### 3.5.3 CTYI Programmes for High Ability Students from Socioeconomically Disadvantaged Backgrounds

These programmes have met with significant success. Breslin's (2016) study showed that students from DEIS schools made up roughly 12% of the total student body on CTYI's 2014 secondary school summer programmes, while 11% of respondents to Cross et al.'s (2019) parent survey had children who were attending DEIS schools. While CTYI's courses still do not reflect the national DEIS-school attendance rate of roughly 19% (DES, 2019, p. 7), they are getting closer as a result of these targeted interventions.

It is important to note that these programmes are offered with no charge to participating students (CAA) or at massively subsidised rates (Aiming High), and are funded by CTYI out of its general operating funds as well as by sponsorship from corporate and university partners. Since the inception of both of these programmes their funding has proved robust, though the level of internal vs. external funding has varied from year to year. A central

aspect of this continuity has been the use of resources already available to CTYI for these programmes, especially on logistical issues such as staff recruitment and payment, classroom bookings and general administration. The LEAP programme has followed this model in utilising already available resources where possible, opening opportunities which would not be there for a standalone operation.

### 3.5.3.1 The Centre for Academic Achievement

The CAA began as the focus of Healion's (2013) doctoral thesis, and sought to provide out of school enrichment classes for high ability students from local DEIS schools. Using an action research approach the project was refined over two cycles, with findings including perceived academic and social benefits to students from taking part in the programme, the importance of celebrating students' achievements in completing the programme and the importance in building links between the school, the university and the wider community (Healion, 2013). Since 2006, the CAA has expanded to run classes in two other Irish universities, University College Cork and the University of Limerick.

The basic running of the programme is very similar to CTYI's mainstream programmes, with students choosing a single subject to study in depth for the term. These subjects have covered a range of fields, from App Design to Horrible History to Football Physics, with a strong emphasis on practical activities and a welcoming and encouraging class atmosphere. In DCU, the classes run on campus on Wednesday afternoons after the students have finished their school day, making the courses stand out for students as an experience of education quite distinct from school (Healion, 2013). There is no formal assessment within the courses, as it is felt that including such assessment would change the nature of the course and introduce unwelcome pressure on students and instructors (Healion, 2013).

#### **Identification**

Like the LEAP programme, the CAA programme used teacher nomination to identify students. The success of this method over the decade of the CAA programme's existence testified to its appropriateness for use with high ability students from socioeconomically disadvantaged backgrounds. The experience that 6th class teachers gained in identifying students for the CAA programme was readily applied to identifying students for the LEAP programme.

### 3.5.3.2 Aiming High

The Aiming High programme is similar to the CAA in its focus on extending access to high quality out of school enrichment programmes to students from socioeconomically disadvantaged backgrounds, but differs in the make-up of the programme students participate in. Where the CAA runs a homogenous programme specifically for primary school students from the target group, Aiming High places students into already-existing, heterogenous CTYI secondary school programmes. There are three such programmes running each summer in DCU: the CTYI programme, the Centre for Academic Talent (CAT) programme and the Summer Scholars programme, the distinctions between which will be discussed in the next section. Each offers a similar range of enrichment courses in fields which students generally do not experience until third level, with subjects including App Design, Medicine, Law, Engineering and Novel Writing among many others available each year. As the three programmes draw large numbers of students from across Ireland and even further afield, the variety of courses available to students is much wider than in the CAA programme, a major advantage to the heterogenous programme approach. The structure of the secondary school programmes is also very different to that of the primary school programmes- instead of a 1.5 hour standalone class each week for six weeks, students are in class from 9am until 3pm each day with an optional study period from 6.30pm to 8.30pm each evening for two or three weeks, a far greater volume and intensity of instruction. There is also a much larger social component to the three secondary programmes compared to the CAA programme- after class each day there is structured social time in the form of organised group activities from 3pm to 5pm and unstructured social from 5pm to 6.30pm and again from 8.30pm to 10pm. The programmes as a whole are split between students staying residentially (generally around two thirds of students) and students commuting each day (generally around one third of students). All of the Aiming High students commute, meaning they can choose to sign out and go home any time after 3pm, but Breslin (2016) found that many opted to stay until 8.30pm or 10pm every day to partake in all of the programmes' academic and social offerings.

Generally, the heterogeneity and intensity of the programmes were experienced as positives rather than negatives by the students taking part. Many pointed to the diversity of other students as something they particularly appreciated about the programme, and none reported feeling out of place, with many instead describing a boost to their self-confidence as a result of their attendance (Breslin, 2016, p. 178-183). Multiple students taking part in

the two week programmes (Summer Scholars and CAT) also expressed a desire for more, stating that they would happily have done a third week or even more (Breslin, 2016, p. 191). Students also returned to the programme over successive summers at a high rate, one which grew with each new intake of students (Breslin, 2016, p. 130). As well as these personal benefits to individual students, the Aiming High programme also had a strong impact on the general make-up of the three summer programmes. Before the Aiming High programme began in 2011, the proportion of students from the target group attending the CTYI summer courses was estimated to be less than 1% (Breslin, 2016, p. 12), a number which rose to 12% by the summer of 2015 (Breslin, 2016, p.132).

While Breslin's (2016) study of students' experiences of the Aiming High programme reported many similar findings to Healion's (2013) CAA study, there were important differences as well. Both studies reported high levels of satisfaction among students and parents with the academic side of the programme, but Aiming High participants evinced a much stronger positive experience of the social side of the programme, most likely a result of the difference in structure between the two programmes described above. Breslin (2016) also described a "CTYI Stigma" which was not present in Healion's (2013) data: a small number of students reported reluctance to discuss their participation in the programme with classmates, and some students did not even talk about the programme with close friends (Breslin, 2016, p. 188). Students attending schools which openly and consistently promoted the programme did not report experiencing "CTYI Stigma" (Breslin, 2016, p. 189-191), suggesting that it is not an inevitable result of participation but a phenomenon which can be overcome by cooperation between stakeholders.

### **Identification**

The Aiming High programme has a two-step identification process, the first informal and the second formal. Schools taking part in the scheme select a number of students (generally two to four per school) to put forward, usually basing their decision on a combination of students' scores on secondary school entrance assessments, results in class and personal characteristics such as work ethic and interest in education (Breslin, 2016). These students then take part in CTYI's Talent Search, an assessment modelled on CTY's Talent Search process described in section 2.2.2. From the start of the programme to 2016, the Preliminary SAT (PSAT) was used for this assessment, and from 2016 to time of writing the Schools and Colleges Abilities Test (SCAT) has been used. Both tests are standardised measures of ability and thus give students a percentile score based on their



year in school in verbal and mathematical reasoning (PSAT) or qualitative and quantitative reasoning (SCAT). Students then qualify for the CTYI programme with a score at the 95th percentile or above, the CAT programme with a score between the 85th percentile and 95th percentile or the Summer Scholars programme with a score below the 85th percentile. On the CTYI programme, subjects are divided into Humanities courses and Science courses (many courses count as both) and students who score above the 95th in one section of the test but not the other are eligible to take courses in the corresponding category (Humanities courses for verbal/qualitative reasoning and Science courses for numerical/quantitative reasoning). Identification therefore plays to students' strengths (though, as discussed in section 2.2.2, instruments like the PSAT and SCAT will not capture all students' strengths, or all of a student's strengths) and offers every student who sits the assessment a chance to take part in a programme paced suitably for their ability.

One important finding from Breslin's (2016, p. 131) study was that students on the Aiming High programme qualified for the Summer Scholars programme at a higher rate (45% in 2015) than qualified for the CAT programme (36% in 2015), with the qualification rate for the CTYI programme lower again (19% in 2015). The provision of suitable programmes for students across the high ability range means that the identification process plays a diagnostic rather than an exclusionary role- matching each student to a programme paced correctly for them rather than simply deciding whether they can take part in a programme or not. While the potential under-estimation of students from socioeconomically disadvantaged backgrounds' actual ability (as discussed in section 2.4) is still a concern, placing them in the wrong programme is a less grievous error than denying them access to any programme.

The CAA programme and the Aiming High scheme have been influential in the development of the LEAP programme through the relationships with schools and communities they have forged, the knowledge about best practice in providing for this cohort of students they have generated and the commitment to providing opportunities to underserved groups they have nurtured. Building on this work, the LEAP programme has deepened this commitment, generated further knowledge and strengthened these relationships.

### 3.6 Conclusion

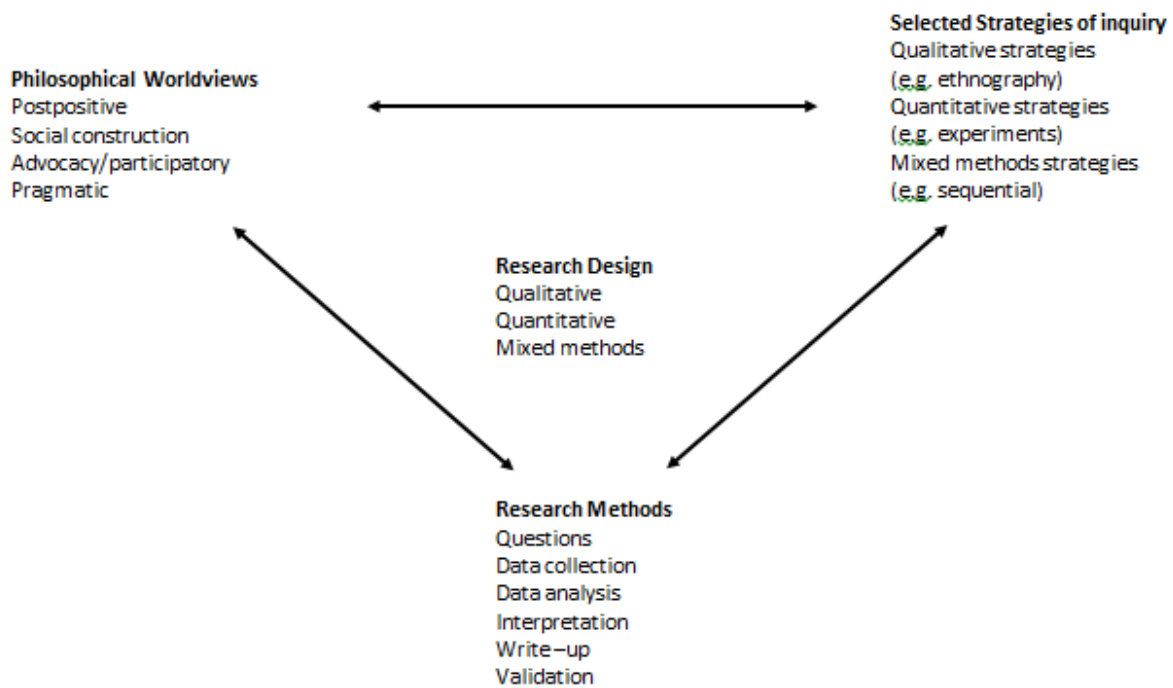
The LEAP Programme was profoundly shaped by the context within which it was designed and implemented. The Irish education system, and particularly the gaps in its provision for high ability students was a major impetus for the creation of an out of school academic enrichment programme for such students. The concentrated socioeconomic and educational disadvantage characterising the area around DCU motivated the targeting of the programme at students attending the DEIS schools in the area. Finally, the institutional realities and existing programmes within CTYI shaped the horizon of possibility for what the programme could provide and what it could aim to achieve. These contextual factors combined with the findings from the literature discussed in the previous chapter to guide my design of the LEAP programme. This design process was at times one of intelligent design and at other times more of an evolutionary response to the unfolding realities of the programme. Yet it was above all a process, and key to the dynamic nature of this process across the three cycles of this programme was the action research approach underpinning this study. This approach is the final piece of the puzzle, as it were, which must be put in place before we can consider the findings of this study. It is vital, however, to remember that the research design did not arise independently of the context or of the academic literature but in conjunction with them. Each of the three areas brought its own particular knowledge and forms of practice, and the LEAP programme was forged through the fusion of these knowledges and practices.

# Chapter 4: Research Design

## 4.1 Introduction

This project was designed around an action research method, one in which the conception, implementation and evaluation of the LEAP programme were seen as interlocking aspects of a cohesive whole. As outlined in the Literature Review and Context chapters above, high ability students from socioeconomically disadvantaged backgrounds are underserved by sufficiently challenging academic opportunities, and the DEIS schools in the area around DCU contain many such students. Action research provided a methodological framework through which to implement a programme to provide such an opportunity and to explore the impact of participation on students and other stakeholders through qualitative data collection over successive cycles of reflective practice. The practical and participatory focus of action research shaped the new knowledge created by the study: it is predominantly based in students' own words about their own concrete experiences, and thus gives a richer perspective than the quantitative research which is more often used in the field. This chapter will lay out the entire research process to show why this rich qualitative data was selected as the focus of this study, and outline how it was collected and analysed.

Research design is a process of both generating questions about the world which one wishes to answer *and* finding the analytical and conceptual tools which will allow the researcher to grapple with these questions. Creswell & Creswell (2018) situate the research design within the interconnected matrix of “philosophical worldviews”, “selected strategies of inquiry” and “research methods” (Figure 4.1)



**Figure 4.1 A framework for design: The interconnection of worldviews, strategies of inquiry, and research methods. (Source: Creswell & Creswell 2018, p.5 , fig.1.1)**

*Figure 4.1 A framework for design: The interconnection of worldviews, strategies of inquiry, and research methods. (Source: Creswell & Creswell 2018, p.5 , fig. 1.1)*

Creswell & Creswell (2018) emphasise that these three features of the research design are distinct but deeply intertwined processes, ones which play out over the whole course of the project as the tools and questions used are refined by the data they generate. The questions on which a study is based will suggest an array of suitable tools, but the tools chosen will shape the type of answer one gets. The research design chapter is, therefore, a guide through the study’s entire development, from the pre-existing circumstances and underlying beliefs that shaped its gestation through the translation of these disparate phenomena into a coherent research agenda with concrete investigative tools and strategies and finally to the interpretation and presentation of the data unearthed by this agenda. This section will trace the research process of this study, starting with *what* the study focussed on and its “selected strategies of inquiry” moving on to look at the “philosophical worldviews” which shaped *why* the study took the form it did (with a brief consideration of *who* the researcher guiding the study was) before outlining *how* the study was carried out in terms of “research methods” (Creswell & Creswell, 2018).

The research methods, as both data collection and data analysis, are the most visible sections of the research design, and they can sometimes end up being seen as the only

aspects of research design. Such elision or excision of the beliefs, ideas and other intangible but important ingredients of the research design is perhaps acceptable in an article for publication with a very limited word count, where the background philosophy can be implied within the text or by contextual factors like the journal in which the work is appearing or the previous work and reputation of an author. For a doctoral thesis, on the other hand, the text must speak entirely for itself, and so everything of relevance must be included. The criteria for “relevance” is, therefore, a crucial question to be borne in mind at all stages of the thesis.

Each section of a dissertation, and the dissertation itself as a whole, is a process of stamping a narrative of best fit upon messy and unruly data, be this “data” the study’s findings (see Chapter 5), the academic literature (see Chapter 2) or the world in which the study took place (see Chapter 3). Nowhere is this more evident than in the research design process, a process of imposing order on the chaos of reality by distilling reality down to phenomena relevant to the study. If the focus is too narrow and the range of phenomena looked at too restrictive, the results will be reductive and overly limited, but if the focus is too broad the results will verge into the overwhelming and important findings may be missed in the sea of “noise”. In the social sciences this process is more difficult yet as the presence of human beings and their unique subjectivities complicates the mechanistic, if complex, world of the physical sciences.

All research worthy of the name strives to produce truthful knowledge, but the ethical responsibility of the social scientist to produce new knowledge that authentically represents reality goes far beyond the impetus of academic integrity. Where the physical sciences are ultimately concerned with “natural phenomena”, the social sciences are the realm of *unnatural* phenomena, of manmade structures and social formations. These structures and formations are influenced, for better or worse, by academic discourses about them in a way that atomic structures or geological formations are not. Knowledge in the social sciences is therefore inherently political, unavoidably informed by, and in turn inevitably informing, the social world it constructs. As this research is focussed on exploring the experiences of students participating in the LEAP programme in their own words, such political considerations will not explicitly arise in the findings of the study. These findings will, however, be considered in light of the wider world within which they were produced in the discussion following on from these findings. In order to generate meaningful findings and a worthwhile discussion, it is vital that the research is based on

productive research questions. The research questions driving this study were deeply linked with the action research approach taken by the study, and so these two aspects of the research design will now be considered together.

## 4.2 *What?* Research Questions

The fundamental question on which this study is built is the question of how high ability students from designated socioeconomically disadvantaged schools perceive their experience of the LEAP programme.

Beyond this overarching question, there are a number of important sub-questions which give a structure to the answer:

- ❖ Do students feel that they benefit from taking part in the course?
- ❖ How do they perceive and describe these benefits?
- ❖ Do other significant figures (teachers and parents) in the student's life feel they benefit from taking part in the course?
- ❖ How do they perceive and describe these benefits?
- ❖ Are there elements of the LEAP programme which participants find particularly beneficial?
- ❖ Are there elements they find unnecessary or counter-productive?
- ❖ How do participants perceive their experience of the transition into the CTYI secondary school programme and their experience of the Talent Search assessment?

### 4.2.1 Research Method

Action research was chosen for this study as, to paraphrase Karl Marx, where other research methodologies only interpret the world, action research's goal is to change it (Marx & Engels, 1974). The *action* part of the study came out of my conviction that there is a gap not only in the academic literature surrounding high ability students from socioeconomically disadvantaged backgrounds in Ireland, but also in the educational provision for these students. The *research* part of the study came from an equally strong

conviction that a project addressing this gap in provision should do so through a structured, participatory and reflective approach to ensure that it is meeting the actual needs of those involved in the programme. From the very start of the process of research design for this study it was clear that the research questions I wanted to grapple with were (i) focussed on exploring the subjective experiences of participants involved rather than measuring straightforwardly quantifiable, empirical phenomena, (ii) premised on acknowledging and overcoming rather than accepting and ignoring unjust aspects of the status quo, and (iii) aimed at practical change in the world rather than the abstract production of knowledge. While I could have answered most of the above questions and justifiably ignored the rest through other approaches, I felt that action research offered the most potential for productively engaging with the questions in line with these underlying principles. The next section will explore this philosophical *fit* between my research questions and the action research approach more deeply.

### 4.3 *Why?* Research Philosophy

Rudestam & Newton (2014) suggests that doctoral students using qualitative methodologies like action research need not bother with a lengthy research philosophy section, noting that researchers rarely write such defenses for quantitative methodologies and that established approaches like action research should by now be well-known enough not to require such a preface. While I certainly agree that action research stands on its own merits as a methodology, I disagree with their analysis on two counts. Firstly, I believe that undertaking a thoughtful and critical discussion of the philosophy underlying one's research will benefit any researcher, regardless of their chosen methodology. The postpositivist and non-positivist methodologies like action research which have generated so much productive research would not exist had not 20th century researchers developed critiques of the dominant quantitative and positivist approaches through unearthing, elaborating and evaluating the unspoken assumptions and axioms underpinning them. More, rather than less, of this critical reflection is needed as these methodologies in turn become paradigmatic and run an ever greater risk of ossifying into accepted knowledge which obscures rather than illuminates the world. As Kuhn (1962) argues, paradigms are at once constructive tools for structuring our shared understanding of phenomena *and* restrictive structures which close off potentially productive lines of inquiry. The Kuhnian paradigm of scientific research as a series of paradigmatic revolutions is driven by metacritical research, or research which is critical of its own critical framework. Needless

to say, Kuhn's conception of scientific "progress" has been challenged, criticised and developed in turn, to such an extent that Kuhn (1992) himself 'wrote back' against what he regarded as radical interpretations of his conception of science and scientific progress. Nonetheless, it remains a productive framework for understanding developments within the social sciences.

The development of the field of gifted education, as discussed in Section 2.2, shows how successive paradigms have risen and fallen (and in some cases risen again) over the last century. One thing which these paradigms have largely had in common is their emphasis on quantitative methods and an accompanying positivist or postpositivist worldview. The emphasis has often been on refining objective (i.e. statistically valid and reliable) identification methods and on measuring (i.e. quantifying) relationships between ability and various educational and life outcomes. There has been less work done in the field on students' own experiences of high ability programmes- a direct result, I would argue, of the bounds of inquiry set by a quantitative methodology and postpositivist worldview. I believe that exploring these experiences is vital work, and the "philosophical worldview" (Creswell & Creswell, 2018) underpinning this study is vital to this belief, and to the form this exploration will take.

Secondly, I would argue that action research specifically, even more so than other (qualitative as well as quantitative) methodologies, demands deliberate and serious engagement with philosophical questions around the nature of research and "knowledge generation" in ontological, epistemological and sociopolitical terms. Each of these will be considered in turn but, as we shall see in exploring each, they are also deeply connected to each other.

#### 4.3.1 Ontological Underpinnings

While I am weary of getting sucked into what Kamil (2011, p. 13) describes as the "ontological quagmire", I also believe that research focussed on social phenomena must articulate a coherent idea of the nature of these phenomena and the social world in which they exist. Cohen et al. (2018) describe the two main schools of ontology within the social sciences as the realist/objectivist school and the nominalist/subjectivist school. The former understands the world as something which exists independent of observers, and asserts that each of us experiences the same phenomena, regarding the act of experiencing as less



fundamental than the external stimuli prompting the act. The goal of research, therefore is to shine light on these external stimuli and how they *cause* individuals and groups to behave (Burrell & Morgan, 1979). For subjectivists, on the other hand, the external world is important only in how individuals actively process their experience of it (Burrell & Morgan, 1979). Rather than a single social reality which is out there to be captured by research, subjectivism believes each of us to be inhabiting our own reality, a reality which overlaps with others' realities on the basis of shared conceptions of ideas and institutions. They see research as a way to describe the meaning invested in external phenomena by the research subject's complex and unique consciousness (Holbrook, 1977). They locate the causes of human behaviour not in discoverable rules and quantifiable relationships but at the confluence of social context and individual agency (Hampden-Turner, 1970).

For this study, the initial decision to take an action research approach was shaped by my broadly interpretivist conception of ontology, even as my exploration of the action research approach further refined my ontological understanding of the world. In line with existential ontology, I believe that "existence precedes essence" (Sartre, 1989), that we *are* before we are anything in particular. I am, therefore, more interested in exploring the experiences of participants on their own terms than through the imposition of abstract external constructs. The existentialists' exploration of the tension between our individual consciousness and our fundamentally social lived experience is rooted in a materialist ontology which recognises the importance of our subjectivity but also the inescapable impact of our context. The approach which I feel best translates this non-idealist humanism and thus the ontological model on which this study is based is that of social constructionism. Social constructionism is, quite simply, the belief that "reality is socially constructed" (Berger & Luckmann, 1966 p. 13). In other words it is in human beings' active production of a social order that reality exists. In the language of the existentialists, reality resides in the essences we impose upon existence. The social order includes institutions, ideologies, identities and other structures we impose upon our lives, and we exist within this order dialectically, shaped by it and shaping it in turn.

Within Berger & Luckmann's (1966) brief definition, there is sufficient room for semantic wrangling that a broad swathe of researchers working from very different ontological backgrounds can all describe themselves as "social constructionists". In his argument for a "realist social constructionism, or if you prefer a socially constructionist realism", for example, Elder-Vass (2012, p. 7) distinguishes between "moderate" social constructionists

who make “plausible claims” and “radical” social constructionists whose claims are implausible. His delimitation of the plausible and the implausible is problematic, however, largely because his “common sense” justifications for what is socially constructed on the one hand and what is *real* (a more privileged category within his framework) on the other serve more to enclose knowledge within existing frameworks than to open new avenues for inquiry. I would argue that limited conceptions of social constructionism as well as anti-constructionist accounts often misrepresent the ontological claims of social constructionism as totalising, as leaving no space for the existence of what might be considered non-social “reality”. From Berger & Luckmann (1966) on, however, non-social reality has been incorporated into social constructionist ontology as something which exists but which can only be meaningfully accessed (for the social sciences at least) through socially constructed reality. Berger & Luckmann (1966, p. 203), for example, argue that “it is possible to speak of a dialectic between nature and society... that society sets limits to the organism, as the organism sets limits to society”. Any study of human beings, therefore, must take into account this dialectical process through which the “natural” is transformed by the social order, a process which cannot be undone or avoided for the purposes of studying the “natural” in itself.

The socially constructed nature of reality has been central to this study from its inception, guiding how I have approached the literature in the field of high ability studies and how I have explored participants’ own articulation of their experiences on the LEAP programme rather than presenting them with pre-determined scales or categories. The latter has been especially productive in allowing the space for the Love of Learning theme to emerge, something which will be discussed in greater detail in section 5.3 and section 6.6. With regard to the literature, there are strong echoes of the debate over the provenance and character of intelligence (see section 2.2) in the debate over social constructionist ontology, and my skeptical stance towards entirely or even predominantly genetic or innate explanations of high ability is largely rooted in a social constructionist view of the natural/social dialectic. This skepticism is not just ontologically driven, but also informed by epistemological issues around what we know and how we know it. It is to these issues that we must now turn in order to outline how this study will explore the socially constructed reality (or realities) of its participants.

### 4.3.2 Epistemological Underpinnings

One goal of this dissertation is to expand the boundaries of knowledge, a goal which implicitly poses the question of what knowledge is. Epistemological debate in the social sciences centres mostly on the paradigms of positivism and anti-positivism (Cohen et al., 2018), a schism born of divergent ideas around what we know and how we know it. The epistemological divide is, of course, deeply enmeshed with the ontological divide described in the previous section: an objectivist worldview suggests if not demands a positivist approach much as a subjectivist worldview suggests if not demands an anti-positivist approach. Oldroyd (1986) argues that positivist approaches extend the worldview of the physical sciences into the social sciences, seeking to “discover” truth in the world in the form of generalisable rules and replicable relationships governing human behaviour. Giddens (1975) links the positivist worldview to quantitative research methods, drawing a line between the idea of objective external reality at the heart of realist ontology and the normative and predictive theories about the world generated by positivist epistemology.

In the broadest sense, anti-positivist approaches are those which do not accept this direct transposition of the scientific method onto the social world, though different approaches reject positivism in quite different ways (Cohen et al., 2018). Generally, this rejection arises from the premise that humans differ from natural phenomena in their subjectivity and their agency, in what anti-positivists see as each individual’s unique experience of the world and the complex contingency of their decision-making within it (Holbrook, 1977). Hampden-Turner (1970) points to an affinity between the anti-positivist worldview and qualitative research methods, with the thick description generated by such methods giving the researcher a chance to construct the world (or worlds) as perceived by human beings and to describe the meaning they invest in the world. Anti-positivist approaches criticise the utterly dispassionate, objective observer of reality presupposed and in some senses required by positivist approaches, arguing that the researcher is above all a human being, and brings to their research all of the complications of human life. The researcher cannot and should not claim to be wholly unbiased and entirely objective, but rather they should reflect on and acknowledge their biases and the place of their own subjectivity within the study (Edwards & Mauthner, 2002). Any contact between the researcher and research participants must also be understood as a social interaction rather than a straightforward act

of measurement, adding to the complexity of the phenomena which are being studied (Gillies & Alldred, 2002).

There are deep divides between positivist and anti-positivist conceptions of the world, and researchers operating within one framework have not hesitated to criticise the perceived shortcomings of the other: Positivist criticisms of anti-positivism are often framed in terms of its excessive anthropocentrism and a naive acceptance of research participants' (possibly false) accounts of their own experiences (Morrison, 2009). Anti-positivist critiques, meanwhile argue that positivism is ideologically blinkered, unable to explore the many vital aspects of human life which cannot be readily quantified and measured (for example, Wittgenstein's [1974] outline of the gap between 'science' and the truly meaningful questions of life). Although this epistemological sparring suggests that researchers *are* either 'positivists' *or* 'anti-positivists', as far back as 1946 Merton and Kendall (1946, p. 546-547) dismissed this polarisation as a "spurious choice", arguing that most social scientists are "concerned with that combination of both [approaches] which makes use of the most valuable features of each". The pragmatic approach they gesture towards has been much fleshed out over the last few decades as researchers tired of what Gage (1989) described as the 'paradigm wars' between qualitative and quantitative research methods.

While I can see the value of a pragmatic approach, I remain unconvinced by its fundamental premise: I do not believe one can simply gloss over deep and difficult questions about what truth is if one hopes to produce truthful research. Similarly, I cannot accept the epistemological foundation of positivist social science: the idea that there is a single truthful account of the universe which we can discover through objective, scientific research for me seems incompatible with the multiplicity of meaning inherent to all human endeavour. My epistemological stance, and therefore the stance enshrined within this study, reflects my adherence to a social constructionist ontology within which "the real" is a product of external phenomena as perceived through the lens of internal but socially inflected consciousnesses. What I am interested in doing in this study, therefore, is not measuring and manipulating data points to reveal the reality which *explains* subjects lives, but working with human beings to explore their lived reality as it relates to their experience of the LEAP programme. Rather than reducing behaviour and beliefs to the product of fixed laws and unvarying constants which I can observe and map, I aim to construct, collaboratively with participants, an account of the complexities and nuance they navigate in their act of participation. This emphasis on the role of the participant as an active agent

within the research process rather than a passive object of inquiry links the ontological and epistemological foundation of the project with its political position, a position we shall now explore.

### 4.3.3 Sociopolitical Underpinnings

Staking a political position for an academic project remains an unorthodox, perhaps even a radical action. Within a positivist framework such a dereliction of dispassionate objectivity is inconceivable, while critical theorists like Habermas (1974) have criticised many anti-positivist approaches for their failure to include the political sphere in their inquiry . Perhaps the most influential articulation of these critiques of avowedly apolitical scholarship is Habermas' (1972) conception of the three *interests*, or modes of knowledge and understanding, namely the *technical*, the *practical* and the *emancipatory*. The technical is understood as instrumental knowledge, the fruits of positivist inquiry into the external structures (laws and rules) which govern behaviour. The practical is understood as the knowledge gained from hermeneutic, interpretive inquiry, knowledge based on the exploration of meanings among "speaking and acting subjects".

While Habermas accepts the epistemological legitimacy of both of these forms of knowledge, he sees them as politically naive at best and actively harmful at worst. The emancipatory, therefore, "subsumes the previous two paradigms; it requires them but goes beyond them" (Habermas, 1972, quoted in Cohen et al., 2018, p. 32). Habermas and other social scientists working within the emancipatory framework are open to using the methods of positivist and antipositivist inquiry, but do so while also including considerations of power (and powerlessness) within their research. They argue that refusing to do so is not adhering to a value-neutral and objective standpoint but implicitly or explicitly endorsing the status quo. Echoing the work of Marxist theorists like Althusser (2006), Gramsci (1972) and the Frankfurt school (see for example Horkheimer, 1972; Habermas, 1974), to critical theorists ideology is not something one can choose to employ or eschew but an always already present lens through which we view the world. Perhaps the best single definition of ideology in this tradition is Althusser's (2006, p. 100): "ideology represents the imaginary relationship of individuals to their real conditions of existence".

Critical theory begins from the starting point of these “real conditions of existence”, conditions which are seen as founded upon oppressive structures and an unjust social hierarchy. These structures are supported both by material conditions and by hegemonic discourse, or the generation of knowledge which reinforces the powers that be. Through *praxis*, or emancipatory action informed by reflection, researchers in the critical theory paradigm strive to achieve material change while also tracing and describing the path of power as it is exerted upon the disempowered. Through the Foucauldian concept of power-knowledge (Foucault, 1977), the material and the discursive are understood to be inextricably bound, each sustaining the other in a fluid system of social relations of domination and resistance. Foucault’s excavation of the role of scientific and academic discourses of expertise and mastery in the construction and continuation of oppressive hierarchies were my first serious introduction to the idea that there is no such thing as neutral or “innocent” knowledge, an idea which I have grown more convinced of the more time I have spent involved in the research process. While my engagement with the literature, and particularly with that section of the literature describing critical theory, has given me the abstract tools to comprehend and articulate these ideas, it has been the practical side of my work which has made them real and urgent to me.

Within the field of high ability education, I think there is a particular need for a critical theory approach: whether researchers wish to confront it or not, the field is and historically always has been entangled in wider issues within the existing social structure. A vast amount of work within the field is explicitly or implicitly concerned with the legitimation of hierarchies on the basis of “merit” and unwilling or unable to problematise the concept of merit or grapple with how it functions within an oppressive and fundamentally unjust system (see for example Gagné’s [2011] discussion of equity and talent development). While few authors have celebrated the status quo as an immutable reality to the extent of Murray and Herrnstein’s (1994) *The Bell Curve*, fewer yet have articulated a coherent systemic critique of this status quo like that offered by critical theory. Within the context of the vast inequality of the world in 2019, where hierarchies of “merit” in children translate into disparities in educational attainment in young adults (Wyner et al., 2007), income in older adults (HEA, 2018) and ultimately life expectancy (Sasoon, 2016), it is vital that researchers interrogate this concept of merit more deeply. Fundamentally, I believe that accepting such “facts” as they are without considering how they came to be or how they might be changed is not an objective position but a decision (intentional or unthinking) made by the researcher which constrains their findings along vital lines of inquiry.

Critical theory, of course, is not without its weaknesses. The most pressing charge levelled against it is that of inherent and unavoidable bias as a result of the avowedly ideological stance taken by the researcher. The researcher's deep commitment to the research as an act as well as a site of knowledge production is also a possible source of bias. As discussed above, I do not see my stance within this study as more ideological than any other stance, just more explicit in acknowledging its own foundations. My commitment to the success of the LEAP programme is also no more likely in itself to affect my findings than a positivist researcher's commitment to the validity of their instrument. In each case there is the potential for conscious or unconscious distortion, but also the space for rigorous research. The steps I have taken to build rigour into this research and the limits of rigour within a qualitative framework will be discussed in section 4.5.3. There are also, in my opinion, two other fundamental issues which demand thoughtful consideration- the Manichean oppressor/oppressed binary which critical theory is liable to embrace and the question of whether critical theory has been effective in accomplishing its goals.

While the idea that we can and must divide the world into the oppressed and the oppressors and then do our utmost to champion the oppressed is a powerful call to praxis, it is also a vast oversimplification of reality. The division is less often a binary than a spectrum or even a Venn diagram; individuals experience intersecting forms of oppression and privilege (whether as positive advantage or simply the absence of oppression) across different aspects of their lives. In focussing on one of these aspects, we run the risk of ignoring potentially more meaningful experiences in other aspects. Within the context of this study, it is clear that there is a tension between participants' relative "high ability" and their relative "socioeconomic disadvantage", a tension which was explored in section 2.5. While students are still subject to multiple forms of oppression, it is clear that they are not subjected along as many axes as less academically successful students. There is also the fact that many of the participants within this study perceive school as a positive institution and even as a vital opportunity in their lives rather than as an instrument of oppression or domination (see section 5.2.2). While the education system reproduces existing hierarchies by advantaging more affluent students in various ways (see section 2.4), hard-won programmes like the DEIS scheme have made earnest attempts to overcome these disparities through more or less successful interventions (see section 2.3.4). Under the shadow of such ambiguity, are the concepts of oppressors and oppressed meaningful categories of inquiry?

Ultimately, I believe that the conceptual framework of the oppressed is a valuable one, even as it has become something of a floating signifier rather than a narrowly-defined concrete term. Standing for a broad constellation of terms like disenfranchised, dispossessed, marginalised, neglected, etc., the oppressed as a term captures all of those suffering under the status quo. The ideas of oppression and the oppressed are vital to the conceptual framework of educational and socioeconomic disadvantage employed within this study. The form of the word itself also gestures at the artificial roots of that suffering- it is not a natural phenomenon but the result of historical and ultimately manmade processes. The question of oppressors, on the other hand is yet more nebulous and, I would argue, much less useful. Are the oppressors those who are actively implementing policies which disproportionately benefit or harm people across class or other lines, or all who are benefitting from such policies? In the context of an out-of-school academic enrichment programme what exactly does it mean to be against the oppressors beyond being for the oppressed? This study will focus on the LEAP programme's efforts to empower students within their own education and wider life and in doing so it will inevitably brush against oppressive structures which circumscribe this empowerment. Crucially, it will also shed light on sites of resistance where people come together to successfully exert their own agency and shape their own lives.

Perhaps a greater question than how one should conceive of social relations within an action research approach is the question of whether one can ultimately change social relations through an action research approach. The conception of the political world underpinning critical theory wherein powerful interests compete to shape social relations to their advantage is one in which the political power of a determined action researcher is negligible, laughable even. It is laudable to set out to change the world through praxis, but naive to believe that a critical practitioner has enough power to effectively oppose oppressive structures, or that simply pointing out injustices in the world will be enough to create a constituency powerful enough to meaningfully confront them. Newton & Burgess (2008) point to the lack of empirical proof of the emancipatory effectiveness of action research grounded in critical theory, a lack observed by Habermas (1972) himself in his early work on critical theory. Habermas also emphasised the need to find new ways of measuring such effectiveness in this early work, arguing that the standard empirical verification approaches of measuring effectiveness are inadequate for the emancipatory interest. As Newton & Burgess (2008) observe, no such new technique has been



established in the intervening decades. In the context of this study, exploring the long-term emancipatory effects of the LEAP programme on participants and their wider community goes far beyond the scope of this thesis. It is certainly a worthwhile avenue for future research, but I believe that the more immediate experiences of students on the programme are both worthy of study in their own right and can also be used to guide the programme in a more emancipatory direction by employing a participatory approach to model empowerment on a small but significant scale in students' day to day lives.

#### 4.4 *Who?* Researcher's Background

Within the social sciences, the researcher is a crucial influence within the research process, albeit an influence that is often taken for granted. Kemmis (2008) argues that it is vital the researcher critically considers their own position within the process, identifying possible biases and blind spots as well as articulating the beliefs and values they are bringing to the study. Within the context of action research it is especially important that the researcher considers their position in relation to the participants, especially with regard to power differences which might exist as a result of this position (Kemmis, 2008). This section will begin by briefly outlining how I came to undertake this project to draw out how my life experiences have shaped the study. It will then turn to an examination of power relations within the study between me as a researcher and participants, including an outline of the steps I have taken to overcome perceived power discrepancies and to prevent them from distorting the study's findings.

I was a latecomer to the field of Education, originally studying English Literature and History in university. From the very start my interest was in unearthing marginalised perspectives and exploring stories which were not generally told- or at least not widely heard. My original engagement with critical theory was almost entirely theoretical, and the practical application of it was to books and other texts- a somewhat abstract praxis. Nonetheless, it gave me a framework through which to understand the world and a discourse through which to articulate this understanding, both of which have proved foundational to this study. Although I did not attend a designated DEIS school, both my primary and secondary schools were public schools attended by students from a wide range of backgrounds, a situation sharply contrasted by my university experiences at Trinity College Dublin (TCD). Students attending TCD are disproportionately drawn from fee paying schools and from more affluent backgrounds in general (O'Brien, 2019), and seeing

the Matthew effect (discussed in section 2.5) in action opened my eyes to the reality of how advantage accumulates and compounds over time. As someone who has benefitted hugely from a diverse array of academic opportunities and believes in the transformational potential of education, I wanted to be part of educational projects which were based on justice and meaningful equality *and* on the joy of learning. While I was originally planning to do so within the field of English Literature, going beyond the ivory tower seemed all but impossible within the rarefied atmosphere of cultural studies at doctoral level. Rather than endlessly talk and write, I wanted to talk and write and *do*, and CTYI proved a space where this was possible.

My involvement with CTYI now spans over fifteen years, albeit with a significant gap in the middle between my attending as a student in primary and secondary school (2004-2008) and my returning as a staff member after finishing my undergraduate degree (2014-present). As a student I benefitted massively from the atmosphere at CTYI both socially and academically, an atmosphere which stood in sharp contrast to an unchallenged and frustrated experience of “regular” school. As a part-time staff member working as a Residential Assistant and subsequently as an Instructor on the secondary school summer programme, I saw first hand the effort and expertise that goes into creating such an atmosphere, as well as the benefits derived by students of all backgrounds from the programme. My support for the programme has always been strong but critical, and as a staff member I was especially concerned about the socioeconomic makeup of the programme. As I learned more about the various initiatives which CTYI had undertaken and was undertaking (namely the CAA programme and the Aiming High scheme, as well as a broader financial aid programme) my views became more nuanced, recognising the economic realities facing an organisation receiving no state funding but committed to expanding access to the programme. When the prospect of devising and co-ordinating the LEAP programme within the framework of a doctoral thesis arose, I leapt at the opportunity to continue moving CTYI in what I believe is the right direction. While I am committed to the success of the LEAP programme, I am more committed to the broader principles underpinning it- especially that of equal access to worthwhile opportunities for all children, regardless of parental income. As such, I have striven at all times to accurately record and reflect the experiences of students on the programme even where these experiences show gaps in the programme or issues with it. Overall, I have done my best to make the LEAP programme a worthwhile opportunity, especially through listening to participants’ voices in shaping what such an opportunity looks like.

The study was commissioned and funded by CTYI, and while they too have been committed to the success of the programme I have not felt any pressure to reach particular findings or achieve specific results. Rather, the emphasis has always been on conducting rigorous research in order to generate meaningful results, as well as on providing a programme which meets the high standards of academic challenge and positive atmosphere which are the basis for any CTYI programme. As shall be seen in the next chapter, I have recorded and reported negative results of the programme as well as positive ones, the ultimate goal of this research being to advance knowledge about what works rather than present a favourable impression of this particular programme or CTYI. Ultimately, I believe that the transparent account of the research findings and how they were reached will show that this has been an unbiased study which can stand over its conclusions.

Although I am confident that I have not been biased in the design or implementation of this research by my position within CTYI, I am very aware of my position of (relative) power through the organisation and my role as a researcher. I have thought deeply on how it might affect the research process, particularly with regard to the potential under-reporting of negative perceptions of the programme and over-reporting of positive perceptions of the programme by participants due to fear of causing offence and jeopardising their place on the programme, a sense that their opinion is not valued or an excess of politeness. While I cannot entirely overcome these restrictions, I have sought at all times to challenge them by creating an atmosphere of collaboration between equal stakeholders rather than prescription by professionals to participants. I also emphasised at every point of data collection that the ultimate goal of the study, the creation and refinement of an engaging and challenging academic enrichment programme, could only be reached through clear and honest feedback from participants and that this was more important to me as an individual/researcher and CTYI as an institution than being told what participants might think we wanted to hear. Finally, it was at all times enshrined in the literature parents and schools received about the programme and in my interactions with all stakeholders that students' places on the programmes were not contingent upon their providing particular answers to the research, or indeed taking part in the research (as distinct from the LEAP programme itself) at all.

As the coordinator of the LEAP programme as well as a researcher, there was repeated contact between myself and the students, parents and schools involved, contact which in

the case of participants in the first cycle of the programme spanned over three years. The level and nature of the interaction between myself and these stakeholders clearly goes far beyond the usual researcher-participant relationship, and it is impossible for me to see them as impersonal data points, or indeed as anything less than full human beings with complex wants, goals and life experiences. I believe that this level of involvement is not incompatible with a scientific approach and that it does not inevitably lead to biased or warped results but rather that it is fundamental to an action research approach built on a participatory model of knowledge generation rather than an insistence on early-positivist distinctions between an expert researcher and the desubjectified researched.

#### 4.5 *How?* Action Research Methodology

Having established the theoretical and philosophical foundations of this study, let us now consider how these are put into practice (or indeed, praxis) through the action research method. Or, to be entirely accurate, through an action research method, as there are many angles from which researchers have come at action research and many uses to which it has been put, from healthcare (Meyer, 2000) to operations management (Coughlan & Coughlan, 2002). As Altrichter et al. (2002, p. 125) state in their survey of the field, “[t]he literature on action research is rich in useful definitions. Yet none of these has gained pre-eminence in the field.” The roots and development of the methodology suggest some reasons for this definitional heterodoxy. Action research as a term was coined in the 1940s, when psychologist Kurt Lewin (1946, p. 35) proposed tackling issues facing marginalised groups through “a comparative research on the conditions and effects of various forms of social action, and research leading to social action. Research that produces nothing but books will not suffice.” Adelman (1993, p. 7) defines Lewin’s conception of action research as “the means of systematic enquiry for all participants in the quest for greater effectiveness through democratic participation.” Action research, therefore, was not tied to any particular discipline or object of inquiry but applicable to any situation characterised by injustice or a democratic deficit. Even as action researchers from different fields shared the same values, the different traditions and habituses (Bourdieu, 1973) from which they emerged shaped the methods through which they approached these situations and the rhetoric through which they described their practice (Adelman, 1993). Of particular note for this study was how the adoption of action research within the field of education led to a move away from the

post-positivist epistemology and quantitative methods at the centre of Lewin's practice towards the inclusion of non-positivist epistemologies and qualitative methods (Bradbury, 2015). I have been particularly influenced by the work of educational action researchers Stephen Kemmis and Robin McTaggart in Australia and Jean McNiff and Jack Whitehead in the UK, who focussed on the need to practice research methods which were based on and affirmed the values of the researcher and the goals of the research (Kemmis & McTaggart, 1998; McNiff & Whitehead, 2006).

Even within the field of education, Kemmis & McTaggart (1988) and McNiff & Whitehead (2006) offer two different approaches to action research- I would argue that Kemmis & McTaggart (1988) foreground political consciousness at all times in their work while McNiff & Whitehead (2006) are more concerned with developing one's personal consciousness as a researcher-practitioner. Beyond its disciplinary pluralism, therefore, I believe that action research's commitment to empowering individual practitioners to reflectively describe their practice and guiding values meant that a proliferation of approaches was inevitable and indeed welcome. Yet there are some core principles which are fundamental to action research. Nyden et al. (1997, p. 7) phrase the underlying stance of action research pithily but accurately: action research is done "with the community, not to it". In their definition, Kemmis & McTaggart (1988) attempt to reconcile developments thus far, describing action research as

"[a] form of self-reflective inquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices, and the situations in which the practices are carried out." (Kemmis & McTaggart, 1988, p. 5)

Zuber-Skerrit's (1992) CRASP model outlines the step by step approach more clearly, calling for "Critical collaborative enquiry by Reflective practitioners being Accountable and making the results of their enquiry public, Self-evaluating their practice and engaging in Participative problem-solving and continuing professional development." While the two definitions emphasise different aspects of action research, I believe they are compatible, and even that they complement each other. Kemmis & McTaggart's (1988) definition is more abstract, prescribing less but presenting more ground for reflection on and interpretation of what exactly it means to "improve the rationality and justice" of one's practices, while Zuber-Skerrit's (1992) more straightforward definition offers more direction but also, I would argue asks less of the researcher in terms of theorising and

contextualising their own practice beyond its immediate implementation. I have therefore based my approach to action research on both definitions.

Within the wider field of action research, this study has taken the specific approach of critical participatory action research, for the philosophical reasons outlined in the previous sections. While critical action research shares epistemological and ontological foundations as well as research methods with other forms of action research like pragmatic action research (Levin and Greenwood, 2001) or co-operative inquiry (Reason, 2002), it places a far greater emphasis on interrogating the underlying social and political context of the research (Boog, 2003). Kemmis' (2008) description of critical participatory action research builds on the two definitions of action research outlined above to incorporate the greater level of historical materialism and the embrace of the emancipatory impulse which critical theory offers. He outlines six essential factors, namely that the research (i) "is undertaken collectively by participants in a social practice to achieve historical self-consciousness... in and of their practice as *praxis*", (ii) "is a process in which [these participants] reflect critically and self-critically", (iii) opens "communicative space- that is, space for collective reflection and self-reflection", (iv) intervenes in participants' "unfolding collective history through exploratory action", (v) has the "practical aim of acting rightly (in terms of moral appropriateness) and with wisdom (based on critically-interpreted tradition and experience) and prudence" and (vi) has the "emancipatory aims of eliminating, as far as possible, character, conduct or consequences that are untoward, distorted, destructive or unsustainable" (Kemmis, 2008. p.133-135). These factors clearly begin to shape the translation of theory into practice by outlining the acceptable parameters of practice, but they do remain guiding principles rather than explicit actions to be taken.

Perhaps the most important practical outline of an action research approach is that of the action research spiral, a process originally described as far back as Lewin's (1946) pioneering work and central to action research ever since in a variety of forms. All forms agree on the centrality of a process of deliberate planning followed by thoughtful implementation accompanied by reflection, though they use a variety of synonyms to describe these steps. Regardless of which exact words are employed, prominent models like Lewin's (1946), Stringer's (2013), McNiff's (2013) and McNiff and Whitehead's (2006) fulfill or at least offer the space within which to fulfill the six factors listed by Kemmis above. I am following Kemmis & McTaggart's (2013) model of action research (Figure 4.2), as I believe it is most aligned with the critical theoretical underpinnings of

this project. It offers a comprehensive approach to bringing research from the initial observation of a problem through multiple cycles of refinement. It consists of “four moments or phases in action research: (1) planning; (2) acting; (3) observing; (4) reflecting” (Altrichter et al., 2002, p.31). At least two cycles are needed, but more can be carried out as needed, depending on the project and the available resources.

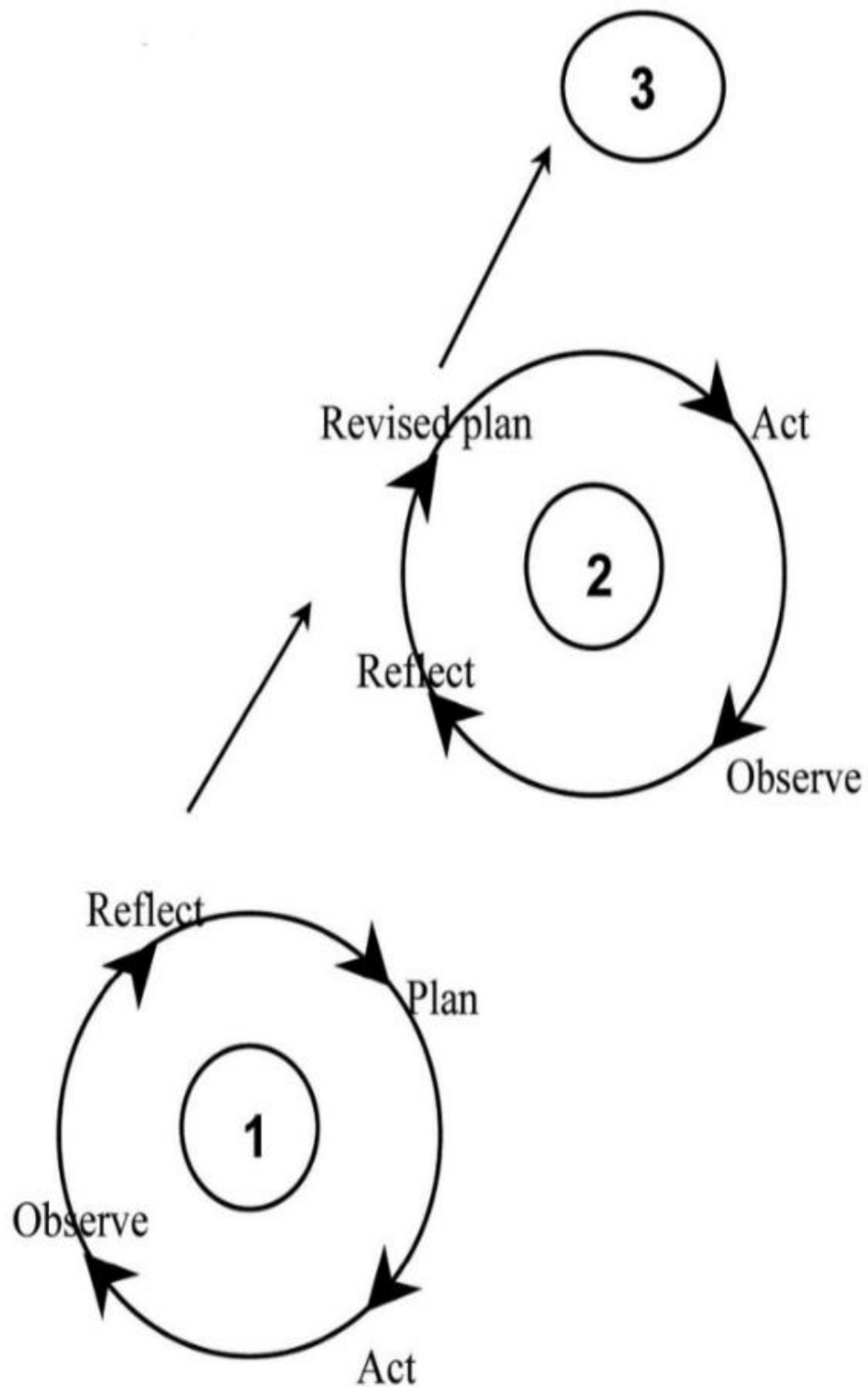


Figure 4.2 Kemmis & McTaggart's (1988) Action Research Model, from Zuber-Skerritt (2001, p.20).

Although the four steps are listed above in the order in which they will generally take place, the model is fundamentally non-linear, rather than a step by step process. In this study, for example, I began by reflecting on CTYI's existing practice and the local context as well as the literature on high ability programming and on educational disadvantage. When I started planning the LEAP programme in collaboration with other CTYI staff, the reflection did not end, though it was no longer the main priority. The action phase began with the first of the LEAP classes, which was also when the observation phase began through the first of the student questionnaires (see section 4.5.1). The action research spiral was also complicated by the structure of the LEAP programme. Instead of one discrete action which could be observed and followed with reflection before the next one, the LEAP programme's action phase played out across three terms in the first cycle and four in the second and third cycles. The data collected each term was explored immediately after, and the programme thus moved from reflection to action to observation to planning to reflection, and so on, multiple times within each cycle as well as between them.

I have made one alteration to the model described by Kemmis & McTaggart (2002); as can be seen in the figure above, they separate the cycles with a period of reflection and planning, whereas my second cycle started while the first was still ongoing (cycle 1 concluded in May 2017 while cycle 2 commenced in January 2017), and the second and third cycles also overlapped substantially. The chief reason for this was that there was a high dropout rate in the first cycle of the programme (twelve students dropped out from an initial group of thirty-one students signed up). As a large proportion of the dropping out occurred before the end of the first week of classes (three students who had signed up did not show up at all and four more stopped coming during the first week), I think that starting the programme over the summer was partially responsible for the high rate and felt that starting earlier in the year would reduce this rate. As the programme is constantly being evaluated with fresh data on student experiences coming in at each phase of the programme, I felt that sufficient reflection and planning were being done while the first cycle was ongoing to begin an improved second cycle. There was also scope for significant alteration in the programme within each cycle as the programme comprises multiple distinct and largely self-contained terms. Demand for the second cycle was much higher than the first (eighty-eight applications received compared to thirty-three) and I think that the course beginning during the school year played a part in this. As such, it made sense for future cycles to continue beginning the programme in January while the previous year's programme was still ongoing.



Reflection and the idea of reflective inquiry are central to action research, and go far beyond the self-critical vigilance demanded by any rigorous research. The correction of practical issues such as the reorganising of cycles outlined above is the type of change which would be made within any research framework, but a deeper level of reflection is also vital to an action research project. Kemmis (1985, p.140) defines such reflection as “action-oriented, social and political” rather than merely technical and individual.

Reflection, he argues, must be considered “a political act, which either hastens or defers the realisation of a more rational, just and fulfilling society” (Kemmis, 1985, p.140). One aspect of this study which I found particularly interesting and challenging, and which inspired much reflection as it unfolded was the question of how a participatory critical framework should best be adapted for a study centred around children.

While self-consciousness is strongly associated with adolescents, “historical self-consciousness” of the type Kemmis (2008, p. 126) discusses is not what typically comes to mind. The structure of the LEAP programme and this research overall was rooted in a critical collaborative approach, but the courses which constituted the programme were not based on a critical pedagogical agenda. Instead, they drew on best practice from the field of high ability studies, and especially on CTYI’s decades of experience in the field.

Reflection was important to all of the course curricula, though it was closer to the academic self-evaluation which guides students as they become autonomous learners than the emancipatory self-reflection that forms critical subjects. As discussed in section 4.3.3, there can be a tension between the critical foundation of the research- fully historicising the situation within which the research is taking place and examining the play of power between those involved- and the actual implementation of it. From the beginning of this project I have felt uneasy about using my position of power within the research to decide that critical reflection on material circumstances was necessary to inform my practice as a researcher and practitioner but not suitable for the central stakeholders in that same research and practice.

I remain unsure that this has been the best course of action, and have spent a significant amount of time reflecting on the problem, both individually and in conversation with others. I found myself caught between not wishing to exclude participants from a critical approach to the world and not wishing to force my critical theoretical ideology onto them or push them into a complicated and potentially distressing renegotiation of reality. The

moral and ideological precepts which guide my life and which informed the philosophical foundations of this study, discussed above in section 4.4, were arrived at haltingly and gradually over a decade of involvement in third level education coupled with years of working with students from diverse backgrounds and observing the reality of their varying levels of access to educational opportunities. Ultimately, I felt the LEAP programme could accomplish more for students by giving them a chance to pursue challenging and engaging academic courses in subjects they were interested in than by mandating their engagement with critical theory. Other projects which have taken an action research approach for high ability students have also opted to focus on non-critical curricula, from Healion's (2013) CAA programme to Hughes' (1999) action research study on adapting science curricula for children. This is perhaps a reflection of the difficulty of adapting critical theory for a young audience, particularly in the context of an out-of-school programme.

Critical participatory action research thus presented me with a framework through which to generate the knowledge I needed to carry out my planned act of praxis, the LEAP programme. The LEAP programme was intended to effect real change in the lives of its participants, and my research sought to explore this change as it was perceived by the participants and significant adults in their lives. Critical participatory action research demanded such a practical goal, and it also suggested the tools which could be used to construct this knowledge collaboratively with the programme stakeholders, tools which we shall now explore in depth.

#### 4.5.1 Data collection

The action component of the action research provided an excellent platform for the research component. Students participating in the LEAP programme were the most important stakeholders in the whole process, and their presence on campus for the programme was an ideal opportunity to engage them in the participatory research process. This was done through questionnaires and group interviews (see section 4.5.1.5) centred around their experiences on the programme. As outlined in section 3.2, the LEAP programme comprised weekly classes over three to four terms, with questionnaires completed at the start and end of each term and group interviews conducted at the end of specific terms.

The sampling strategy used for this research was “convenience sampling” or “opportunity sampling”, which is widely used within action research (Jupp, 2006). In an opportunity sampling approach, the “sampling presents itself, so to speak, and often includes the researcher's “captive” group of students.” (Suter, 2012). The “captive” students who participated in the LEAP programme were, of course, all offered the choice as to whether they wished to take part in the research or not (see section 4.7 for further details and the steps taken to ensure the study followed ethical best practice).

Students were not the only stakeholders. Many of the students were dropped to class and collected by their parents each day, meaning that it was convenient for some parents to take part in the research as well and provide their valuable perspective. The final group from which data were collected was students’ teachers, though the collection of this data was more removed from the day to day operations of the programme than the collection of the student and parent data, and as a result far less were collected. While the students almost universally took part in the questionnaires given at the start and end of each term of the LEAP programme, the student group interviews, parent group interviews and teacher questionnaires were completed by a self-selecting sample of volunteers from the population of total students, parents and teachers involved. From a quantitative perspective, convenience sampling in general and self-selected samples within a convenience sample in particular are “weak on external validity as it is impossible to generalize from the data it produces because it is not representative of the social world in general.” (Jupp, 2006, p.3). As discussed in section 4.3, I am not working within a quantitative framework or positivist worldview, and do not claim to describe any population beyond students who participated in the LEAP programme. In presenting the findings of this study I aim to present and explore the experiences of students and their parents and teachers as they appear in the data and on their own terms rather than as representative of a larger population.

#### 4.5.1.1 Students

The entire study is aimed at constructing a beneficial programme for participating students through generating knowledge about their experiences of the programme, and so the bulk of the research was focussed on giving them a space to elaborate these experiences. The formal “communicative space” (Kemmis, 2008, p.129) took the form of questionnaires and groups interviews.

Questionnaires were chosen as the most used instrument of the study as they allow the researcher “to collect information efficiently from a large number of people.” (King, Morris et al. 1987, p.72). “Efficiently” is perhaps the operative word here, and can be understood in two distinctive ways. On the one hand, logistical efficiency is something to be striven for, and it is obviously far more efficient to have a group separately and concurrently filling out questionnaires than to interview them in sequence. On the other hand, there is a tendency in questionnaires towards what we might term epistemological efficiency, the reduction of complex issues to quick, easily answered questions. The various questionnaires students completed (see Appendix C) all contained a mixture of open-ended and closed questions in an effort to find the correct balance between brevity and comprehensiveness. Wilson & McLean (1994) discuss the difficulty in creating questionnaires with sufficient structure to generate a coherent body of responses but with enough freedom for respondents to use their own voice. In the case of critical participatory action research, of course, it is especially important that questionnaires are a genuine vehicle for authentic expression. Open ended questions were therefore prioritised over scale or binary questions to give students every chance to elaborate.

As well as providing students with a platform to express themselves, I also wanted to make sure the questionnaires would engage rather than confuse, alienate or bore students. Bell’s (2007) guidelines for tailoring questionnaires to children stress the need for simple, clear and concise question formulation. As such, I kept the questions straightforward and clearly phrased, and stressed when administering the questionnaires that students could write as much or as little as they wished for each question.

Each student was given the opportunity to complete a questionnaire at the start and end of each term during the LEAP programme. A timeline of these terms is presented below (Figure 4.3) and the number of questionnaires collected at each point is presented below in Table 4.1.



Figure 4.3 LEAP Programme Structure, 2016-2019

**Table 4.1 Number of Student Questionnaires completed by Term**

<b>Term</b>	<b>Cycle 1</b>	<b>Cycle 2</b>	<b>Cycle 3</b>
<b>Spring 6th Class Initial</b>	N/A	53	38
<b>Spring 6th Class End</b>	N/A	44	27
<b>July Initial</b>	26	34	9
<b>July End</b>	24	35	8
<b>Autumn Initial</b>	11	47	15
<b>Autumn End</b>	N/A	42	12
<b>Spring 1st Year Initial</b>	18	31	12
<b>Spring 1st Year End</b>	12	25	10

The large number of questionnaires completed by students, 579 in total, validates King, Morris et al.'s (1987) point, generating a large and varied account of students' experiences of the LEAP programme. The data took two forms, qualitative data from the open ended questions and quantitative data from the scale and Yes/No responses. Detailed description of how these data were analysed will be considered in the next section. The questionnaires were refined between terms to focus in on notable results, giving the research a level of responsiveness towards the findings that allowed me to dig deeper into emergent areas of interest. Of particular importance over the course of the research was the question of why some students carried on attending throughout the LEAP programme while others did not. I attempted to reach the latter group with questionnaires by email and by post, but did not receive responses (though I noted any informal responses that I did receive in my researcher diary). While the research was therefore limited to capturing one side of the issue, being able to ask students questions about what (or who) kept them motivated to continue attending did generate some valuable responses.

Although questionnaires can respond to emergent themes from one cycle to the next, they cannot immediately shift focus to follow interesting threads which emerge as students answer them. Semi-structured interviews can identify and explore student experiences which are not directly related to the question asked but which are nevertheless relevant to the wider goals of the research. Group interviews were used with students for just this purpose, to go into their experiences in greater depth and tease out things which would not have quite fit into a questionnaire response. Greig and Taylor (1999) suggest that group interviews for children are a less intimidating option than individual interviews, noting that children may feel more at ease in a group as it is a natural setting for them. Cohen, et al. (2018) point to the appropriateness of “formalising the session” for older children, suggesting that they respond positively to the sense of gravity this lends proceedings. Simons (1982), however, argues that it is important for the researcher not to be perceived as an authority figure as this can impact on children’s openness and honesty in responding to questions. Similarly, Bailey (1994) notes the danger that children will see the interview as a test situation. In the interviews, therefore, I sought to present the research as an important but ultimately democratic and participatory process to which students were contributing by taking part in the interview.

Interviews were a particularly useful tool for this study because a well-conducted interview can encapsulate the action research methodology by being participatory, applied and, above all, social. As Kvale (1996) points out, interviews are a human interaction and thus can be understood as a research analogue of what Cohen et al. (2018, p. 409) describe as the “social situatedness” in which we construct and refine knowledge in our day-to-day lives. Laing (1967) sees the interview as an “intersubjective” experience, as an opportunity for interviewees to present the world as they experience it to the interviewer. This human contact, Borg (1963) argues, is both the greatest strength and the greatest weakness of the interview as a tool- there is much greater scope for generating data through an interview than a questionnaire, for example, but much greater scope for bias from the interviewer or dishonest answers from the interviewee as well. To avoid this bias, I designed a standardised open-ended interview (see Appendix C) and followed Arksey & Knight’s (1999) advice on avoiding leading or confusing questions, as well as Tuckman’s (1972) guide to conducting the interviews effectively. Each interview was recorded and transcribed, though as Mishler (1986), Kvale (1996) and Scheurich (1995) all point out, transcription is a process which writes out the invaluable non-verbal aspects of the

interview. Cohen et al. (2018, p. 427) suggest inclusion of different “*kinds of data*” such as tone, inflection, emphasis, pauses and other features of a conversation that may not be evident from the words used alone increases the richness of the account but also demands acts of interpretation rather than simple transcription. As such I reflected critically on my interpretation of the recording when I came across such “data” and included it in the transcription only where I was absolutely certain of my interpretation. Above all the experience of trying to accurately transcribe a group conversation to the page opened my eyes to the difficulty in capturing the complexity of human expression, and the unavoidable limitations of the various tools through which we attempt to do so. Nonetheless, the group interviews generated a wealth of qualitative data which paints a partial picture of this complex human experience, the analysis of which we shall consider in the next section. Table 4.2 details the timeline of the group interviews conducted and the number of students who participated in each.

**Table 4.2 Timetable of Student Group Interviews**

<b>Cycle</b>	<b>Term (No. Participants)</b>	<b>Term (No. Participants)</b>	<b>Term (No. Participants)</b>
<b>Cycle 1</b>	July End (5 Participants)	Spring 1st Year End (4 Participants)	
<b>Cycle 2</b>	Spring 6th Class End (8 Participants)	Spring 1st Year End (3 Participants)	
<b>Cycle 3</b>	Spring 6th Class End (4 Participants)	July End (3 Participants)	Autumn End (3 Participants)

In order to explore students’ experiences of the secondary school programme once they had made the transition to it, questionnaires were conducted with students taking part in the secondary school programme and group interviews were carried out in July of 2018. Many former LEAP students on the secondary school programme chose not to take part in this phase of the research collection, perhaps because they were dispersed across the three



summer programmes (CTYI, CAT and Summer Scholars) and a large range of classes, and the research therefore took place outside of class time. The responses which were collected, therefore, represent a self-selecting sample of students who wished to take part in the research relatively strongly. As such, they are a rich account of the experiences of individual questionnaire respondents and group interview participants but are not necessarily representative of former LEAP students now on the secondary school programmes more generally.

**Table 4.3 Outline of research conducted with students on CTYI Secondary School Programmes**

<b>July 2018</b>	<b>CTYI</b>	<b>CAT</b>	<b>Summer Scholars</b>
Questionnaire	2 Respondents	6 Respondents	4 Respondents
Group Interview		3 Participants	2 Participants

As the number of students taking part in the programme varied from term to term and from cycle to cycle, the LEAP programme’s enrolment numbers (as distinct from the number of students who took part in the research itself) were also an important source of data for this study. These numbers present an ineloquent but important perspective on the programme, and are relevant to a number of the findings of this study, especially those relating to the long-term engagement inherent to the programme.

#### 4.5.1.2 Parents

Students are the pivotal stakeholders in this project, but they are certainly not the only ones. The importance of students’ families, and particularly their parents, is noted in both the high ability literature (Freeman, 2000) and the literature on disadvantaged students (Kavanagh & Weir, 2018). As well as having a part to play in the construction and development of the programme, parents also offer a unique insight into their children’s experiences. Parents often notice things which the children themselves do not, and may also be willing to articulate negative observations that children do not feel comfortable voicing. When parents offer similar perspectives to their children, this serves to triangulate both accounts. Group interviews were conducted at the end of specific terms of the programme with parents who volunteered to take part.

Group interviews were used to capture the parent perspective as the “intersubjective” (Laing, 1967, p. 66) nature of group discussion was better aligned with the participatory goal of the project than a questionnaire. As with the student group interviews, the parent group interviews were based on structured but open-ended questions (see Appendix C). At points, the discussion was productively diverted and the dynamic grew closer to a focus group than an interview. Morgan (1988) suggests that such group-led rather than interviewer-led discussions can construct a collective view of the topic which is more than the sum of the individual opinions of those involved. As Smithson (2000) notes, however, group dynamics can narrow the range of opinions expressed as a small number of dominant personalities shape the discussion and other participants consciously and subconsciously restrict themselves. In an attempt to overcome this possible bias, I also conducted individual interviews with parents during the second cycle. In these interviews, however, I found parents less rather than more willing to share their opinions. It was far easier to create a sense of democratic collaboration in a group setting than in the individual interviews, despite my best efforts. I therefore returned to conducting group interviews for the rest of the study. Table 4.4 outlines the parent group interviews conducted and the number of participants in each.

**Table 4.4 Timetable of Parent Group Interviews**

<b>Cycle</b>	<b>Term (No. of Participants)</b>	<b>Term (No. of Participants)</b>
<b>Cycle 1</b>	July End (4 Participants)	March 1st Year End (5 Participants)
<b>Cycle 2</b>	Autumn End (2 x 1 Participants)	
<b>Cycle 3</b>	Spring 6th Class End (2 Participants)	July End (2 Participants)

#### 4.5.1.3 Teachers

While teachers are not as immediately involved in the LEAP programme as students who attend it, they remain important stakeholders in the project. Where students and their families provide a micro-level perspective on the programme, teachers offer a zoomed out, meso-level perspective. As well as seeing the impact of the programme on individual students, they can trace its effects across multiple students, often over a number of years. Teachers in DEIS schools may also be more tuned in to the wider local context, as their vocation can bring them into contact with other programmes and initiatives intended for their students. On the other hand, the nature of the LEAP programme complicated the collecting of data from teachers. The fact that students moved from primary to secondary school in the middle of the programme meant that both primary and secondary school teachers had only a partial perspective on the LEAP programme and its impacts. Where the CTYI-student interactions in the CAA programme (Healion, 2013) and Aiming High scheme (Breslin, 2016) were mediated through schools, once students were nominated for the LEAP programme contact between CTYI and these students was direct as subsequent course information was sent to students' home addresses. While primary and secondary schools were kept informed about each term, primary schools were not directly involved in recruiting students after the first term and secondary schools not at all. As such, there was not the same level of engagement with schools as in Healion's (2013) CAA study and Breslin's (2016) Aiming High study, and there is less data available from the school perspective as a result. Questionnaires were sent to primary school teachers from all the

schools involved in June 2017 and 2018 and to secondary schools with involved pupils in March 2017 and 2018, but the response rate was quite low, and none of the respondents chose to take part in an interview after filling out the questionnaire. As such, the teacher data in this study is limited, though it still provides interesting insights into student experiences of the LEAP programme. Table 4.5 details the timeline for data collection from the primary and secondary teachers.

**Table 4.5 Timetable of Teacher Questionnaires**

<b>Cycle</b>	<b>Primary School Questionnaires (No. of Participants)</b>	<b>Secondary School Questionnaires (No. of Participants)</b>
<b>Cycle 1</b>		Secondary School Teacher Questionnaire March 2017 (2 participants)
<b>Cycle 2</b>	Primary School Teacher Questionnaire June 2017 (6 participants)	Secondary School Teacher Questionnaire March 2018 (3 participants)
<b>Cycle 3</b>	Primary School Teacher Questionnaire June 2018 (5 participants)	

#### 4.5.1.4 Researcher

Reflective practice is central to action research, and thus researcher-centred data features heavily in many action research projects. Action research in the service of Living Educational Theory (LET) generation, in particular, foregrounds explicit accounts of the researcher’s developing understanding of their practice as the foundation of their LET (Whitehead, 2008). In this study, the primary focus is on the concrete impact of the LEAP programme on participating students rather than on my own evolution as a practitioner, and the data collected during the study reflects that focus. My researcher diary, in which I

noted salient questions, statements and observations informally, does represent a form of researcher-centred data which played an important role in the study. McNiff (2016, p. 53) describes the research diary as “self-reflection” which “may be understood as a conversation with oneself”. This reflection spanned the whole project, from my ideas for the development of the LEAP programme to capturing important phenomena and incidents which were not captured by the other data collection methods to understanding and analysing the data which was collected. In this it complemented the data analysis technique used within the study, constant comparative analysis, which will now be outlined and discussed.

#### 4.5.2 Data Analysis

In a qualitative research framework there is no straightforward, universal template for data analysis. Instead, the researcher must select suitable analytical tools from a wide range of available options. As with the research method, the choice of analytical tools must “fit” with the research questions and the underlying research philosophy. Cohen et al. (2018) argue that such a “fitness for purpose” is the most important criterion to be considered in deciding on analytical tools, as all other qualities of the tools are shaped by this “fitness”. The goals of this study, as outlined in the research questions (see section 4.2) related to exploring the experiences of students and other stakeholders of the LEAP programme, and the data generated sought to capture these experiences. The analysis of this data had to impose an organisational scheme sufficiently open and nuanced to preserve the richness of these experiential accounts, while simultaneously reducing the mountain of data into a comprehensible and coherent format. This required the observation of significant patterns within the data and the creation of categories to distill the meaning of these patterns and explore relationships between them.

The fundamental framework through which the data was organised and analysed in this study was that of coding, or “the translation of question responses and respondent information to specific categories for the purpose of analysis.” (Cohen et al., 2018, p.428-describing Kerlinger, 1970). A code, according to Saldaña (2015, p.3) is “a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data”. In other words, a code captures relevant meaning. Coding allows researchers to find similar responses across different

questions, types of data and respondents on the basis of a shared meaning between the responses. For this study, the open-ended responses from the questionnaires, and group interviews described in section 4.5.1 formed the coding set. Responses within questionnaires and responses within interviews are different forms of data, and coding is a way of drawing links between and across these forms based on what they signify. Of course, there is meaning in how and within what context something is said, and so the account of this study's findings will make clear what type of data each finding is being drawn from.

After each round of data collection (between each term of the LEAP programme) the data collected was transcribed and systematically coded into rudimentary *open* or descriptive codes. These codes were created by me based on Gibbs' (2007) working definition of a code as a collection of text fragments saying the same thing. Responses which described things students learned on the LEAP programme being useful in a school context, for example, were coded under Learned Useful Skills & Knowledge. The codes were expanded and re-worked during this first round of coding to ensure that they were both comprehensive and discrete (Miles & Huberman, 1994). Some responses were coded multiple times in order to capture all of the meaning behind them and ensure that the coding was comprehensive in the sense of capturing all of the meaning in the text being coded and not just in the sense of ascribing a code to every piece of the text (Flick, 2009).

As Cohen et al. (2018, p. 560) stress, "coding is not a one-off exercise" but an iterative process of coding and re-coding, interpreting and re-interpreting. The method of constant comparative analysis is built on this emergent style of coding, where analysis is a reflexive process which adapts itself to themes, patterns and relationships emerging from the data (Merriam, 2009). The researcher identifies these themes, patterns and relationships through "comparing one segment of data with another to determine the similarities and differences. Data are grouped together on similar dimension. The dimension is tentatively given a name; it then becomes a category." (Merriam, 2009, p. 30)

The technique of constant comparative analysis was originally introduced by Glaser (1965) specifically for use within a Grounded Theory framework (Glaser & Strauss, 1967). Fram (2013) presents a review of the literature relating to the use of constant comparative analysis within other methodological frameworks, concluding that it can be used within a variety of other frameworks "to identify patterns in the data and to organize large amounts

of data so as to abstract categories” (Fram, 2013, p. 20). Fram (2013, p. 20) ends her review with “a call to action to qualitative researchers to further investigate the use of the constant comparative analysis method outside of GT as a part of the tradition of innovation in qualitative research.” Action researchers have, by and large, not yet heeded this call, with very few examples of constant comparative analysis being used for an action research project described in the literature. Within the last two years this has begun to change, with Howard et al. (2018) and Sinwell (2017) describing the successful use of constant comparative analysis within an action research methodology.

I believe that my research will add to this growing body of literature by showing again that action research and constant comparative analysis are compatible. In an action research study, the flexibility that constant comparative coding gives to analysis reinforces the responsiveness of the project as a whole to emergent findings from the data and mirrors the cyclical rather than linear conception of the research process. The first round of *open coding* was followed by *analytic coding*, which considered the relationship between the codes and began constructing hierarchies to contain them. The Learned Useful Knowledge & Skills code mentioned above, for example, was grouped with the Learned Meta-Cognitive Skills, Interest Academic Content, Changed Experience of School and No Impact codes under Academic Impact, as they were all impacts the LEAP programme had on students’ academic lives.

A third round of coding was carried out at the end of each cycle of the research to find themes which reflected the codes as a connected system. Cohen et al. (2018) describe this deeply interpretive phase of coding as *axial coding*, which can be understood as a coding of codes, a creation of categories within the open and analytic codes based on shared referents. The Academic Impact analytic code, for example, was placed alongside the Social Impact and Personal Impact analytic codes under the Impact of Programme axial code. Following Flick’s (2009) assertion that the temporal order of these codes is not immutable, I moved back and forth between the different coding procedures throughout the course of the analysis as new data added to or questioned existing codes.

The time in between each round of data collection was used to reflect on the findings emerging from the data and these findings were used both to shape the next cycle of the programme and to refine the data being collected. Insights, observations and questions were recorded and teased out in my researcher diary, as discussed in section 4.5.1.4. This

diary also proved a valuable tool in re-orienting me for the coding process with each new round of data, allowing me to trace the development of the codes over the course of the research process.

The next chapter will show the final form of these codes and themes, but it is difficult to present their evolution over time as this evolution played out across NVivo, hand-drawn conceptual maps and exploratory paragraphs in my researcher's diary. Appendix F shows an example of one of the codes which comprised the Love of Learning theme, "Anticipation of Future Courses". This code was grouped together with other codes which showed the value students attached to learning when thinking about the LEAP programme, and this grouping was designated a theme as it was clearly a significant factor in students' experience of the LEAP programme in and of itself. Once it became clear that codes related to student's perceptions of learning merited their own theme, the theme expanded to cover all aspects of these perceptions in the data. Including students' perceptions of learning in a school context, for example, gave greater insight into how students thought about learning and thus informed a wider view of their love of learning.

The coding was all carried out within the programme NVivo, a Computer Assisted Qualitative Data Analysis Software (CAQDAS) widely used by educational researchers (Leech and Onwuegbuze, 2011). NVivo is designed with coding in mind, and makes the constant comparative coding process more efficient by allowing the researcher to construct an easily navigable database of codes within which links, patterns and themes in the data can be represented in a variety of ways (Merriam, 2009). As DCU has a license to use this software and training workshops are available for researchers, I was able to get the most out of NVivo in a way that a researcher without this institutional support might not. As well as achieving the necessary technical proficiency to use NVivo, the workshops were very useful in defining exactly what NVivo could and could not do in a deeper sense. As Zamawe (2015, p. 13) put it, "the main function of CAQDAS is not to analyse data but rather to aid the analysis process, which the researcher must always remain in control of." NVivo and other similar programmes are ultimately "data management packages" (Zamawe, 2015, p. 13). Given the amount of data to be managed in this study, NVivo was exceptionally useful in this regard.



James' (2013) criticism goes further than underlining the inability of NVivo to analyse data, arguing that the use of NVivo can actively hinder the researcher's ability to analyse data:

“Dealing with the blocks of often de-contextualized and disembodied data segments that computers can churn out may, if we are not mindful, lead us to forget the huge complexities of our subjects' lives which, as analysts, we set out to understand.” (James, 2013, p. 568).

The critical participatory action research approach used in this study, and especially the amount of contact I had with the research participants, meant that at all times I was deeply aware that I was working with human beings, with all of the complexity that entails. As well as this, even within the coded “blocks” of text students' individuality often shone through, emphasised by particular turns of phrase, varying intensity of sentiment and even occasional analogue emojis. This will become clear in the next chapter, which draws heavily on participants' own words to outline and explore the themes identified by the analysis described in this section.

There were, however, questions within the research where qualitative responses alone were not enough. The most important such questions related to student disengagement, which could not be answered by the disengaged students themselves. To shed some light on the phenomenon, quantitative data in the form of student enrolment numbers and also responses to scale and multiple-choice questions about course enjoyment and encouragement to attend were analysed and presented in graphical form. Student qualification for the various CTYI secondary school programmes (see section 3.4.3.2) is also quantified and discussed in the findings. The inclusion of this data does not, I would argue, make this a mixed methods study. The research is still fundamentally qualitative, and the analysis of even these quantitative datapoints is conducted through the lens of students' articulations of the meaning of their experience of the LEAP programme rather than through attempting to infer or generalise such meaning statistically. This approach has implications for the evaluation of the data generated and analysed, and these will now be discussed.

### 4.5.3 Evaluating the Data

In qualitative data analysis one cannot use p-values or other statistical tools to justify one's claims- as Patton (1990, p. 372) notes, there exists "no formula for determining significance". Significance takes the form of meaning, and meaning must be constructed within the data through acts of interpretation by the researcher. As qualitative approaches typically generate more data than can be discussed within the research account, interpretation begins with decisions on what is "worth" including and how it should be presented. Each act of interpretation must be justified by the researcher on the basis of its appropriateness to the study, and a comprehensive outline of these acts and the reasoning behind them is the only way to defend such qualitative data analysis. It is worth noting here that such an outline is not prescriptive, or intended as a recipe for replication. If crucial contextual factors are different in the case of such replication, and they inevitably will be due to the nature of qualitative research into social phenomena, then the end results of the inquiry will also be different. Indeed the different results are almost a moot point: if these crucial contextual factors are different then the research process as a whole will take a different approach from the very beginning. Positivist constructs like validity and reliability which claim a transcendent objectivity are, therefore, methodologically incompatible with a critical action research approach. The angst which anti-positivism can inspire is described by Bernstein (1983) as "Cartesian anxiety", a sense that researchers face a binary choice between (unattainable) logical empiricism on the one hand and (untenable) radical relativism on the other.

In response to this epistemological unmooring, qualitative research theorists and practitioners have suggested and developed an array of criteria for evaluating qualitative research. Schwandt (1996, p. 59) captures the new conception of truth and the new standard of certainty underpinning these criteria:

One of the principal lessons of postfoundational epistemology is that we must learn to live with uncertainty, with the absence of final vindications, without the hope of solutions in the form of epistemological guarantees. Contingency, fallibilism, dialogue, and deliberation mark our way of being in the world. But these ontological conditions are not equivalent to eternal ambiguity, the lack of commitment, the inability to act in the face of uncertainty.

In effect, postfoundational epistemology suggests that we can know things about the world, but we cannot know things independent of context or with total certainty. Scientific rigour confers legitimacy on research findings only within these bounds. Yet the question of what constitutes rigour, and indeed the question of whether it is a productive concept at all, is another site of significant debate. Sandelowski (1993, p. 1) suggests that there is an inflexibility and an uncompromising harshness and rigidity implied in the term “rigor” that threaten to take us too far from the artfulness, versatility, and sensitivity to meaning and content that mark qualitative works of distinction

Barbour (2001, p. 1115) argues that the “uncritical adoption of a range of technical fixes (such as purposive sampling, grounded theory, multiple coding, triangulation, and respondent validation)” will achieve nothing “unless they are embedded in a broader understanding of the rationale and assumptions behind qualitative research.” Rigour, therefore, derives from what Lincoln (1995) dubs “local” decision-making informed by *both* the theoretical literature and the practical context of the project. The theoretical literature present two predominant frameworks for evaluating qualitative research: Lincoln & Guba’s (1985) framework of rigour through the theoretical constructs of *credibility, transferability, dependability and confirmability*; and Creswell & Poth’s (2018) framework of rigour through the practical strategies of prolonged engagement and persistent observation, triangulation, peer review or debriefing, negative case analysis, reflexivity (clarification of researcher bias), member-checking, thick description, and external audits.

Creswell & Poth (2018) suggests that at least two of the practical strategies should be implemented, and in this study prolonged engagement and persistent observation, triangulation, reflexivity, an audit trail and thick description were all used. The adoption of five strategies was not an attempt at “validity by numbers” but a result of these particular strategies aligning with the research study’s goals, philosophy and methods. There is much crossover between the two frameworks: Barusch et al. (2011) outline how certain theoretical precepts outlined by Lincoln & Guba (1985) implicitly or explicitly underpin strategies recommended by Creswell & Poth (2018) and certain strategies featured in Creswell & Poth’s schema are integral to putting Lincoln & Guba’s theoretical constructs into practice. Reflecting these commonalities, this study draws on aspects of both frameworks. In adapting the frameworks to an action research methodology, they are considered in relation to the five principles for narrative inquiry proposed by Heikinnen et al. (2012): historical continuity, reflexivity, dialectics, workability and evocativeness.

While this study is not a narrative inquiry, this dissertation is a narrative of an inquiry, and I believe that these five principles are a productive way to reflect upon this document as a narrative of action research. As Heikinnen et al. (2012, n.p.) argue, “it is not easy to separate research from the research report, particularly in action research in which doing research and writing on research are intermingled.” Taken together, the three frameworks interact and intersect to illuminate the trajectory of the project and outline its claims to legitimacy.

### **Credibility: historical continuity & prolonged engagement and persistent observation; dialectics & triangulation**

Houghton et al. (2012, p. 13) summarise credibility as referring to “the value and believability of the findings”, suggesting, somewhat tautologically, that it is achieved by “conducting the research in a believable manner and being able to demonstrate credibility.” Two of Creswell & Poth’s (2018) strategies were utilised in this study to create credible research: prolonged engagement and persistent observation, and triangulation.

The first of these strategies is exactly what it sounds like, and rests on the idea that sustained contact with the context of the research, participants in the research and the research findings will provide the researcher with a better insight into these crucial factors and contribute to a more nuanced and meaningful study. “Prolonged engagement” is certainly one term for four years of doctoral study focussed on this project, and I can see how my understanding of the world of the study has grown over this period and molded the study to its context. The research timetable outlined in section 4.5.1.5 shows how data collection and analysis was a deliberative process which played out over the course of years spent immersed in the study. The world of the study, though, is not limited to the immediate spatial and temporal reality of the study. Under the principle of historical continuity, Heikkinen et al. (2012, p. 10) argue that “good action research recognizes the historical evolution of action both as a general macro-level phenomenon and as a micro-level continuity of historical action.” In other words, my prolonged engagement and persistent observation are informed and augmented by the knowledge that “action does not begin in a vacuum, and action never ends” (Heikkinen et al., 2012, p.10). This dissertation gives an account of the evolution of the LEAP programme from its inception to the end of its third cycle, but also contextualises it in terms of the other programmes and initiatives within CTYI, DCU and the Irish education system generally which the LEAP programme built on.

Triangulation is described by Barusch et al. (2011, p. 13) as a technique which can “deepen understanding by collecting a variety of data on the same topic or problem.” In this study, the perspectives of different stakeholders were used as a form of *data triangulation*, while different data collection methods were used as a form of *methodological triangulation* (Denzin, 2009). How these different perspectives interact gives insights into the phenomena being investigated, while areas where they converge have a stronger claim to credibility than areas where only one perspective exists. Heikkinnen et al.’s (2012, p.12) principle of dialectics asserts that “social reality is constructed as a dialectical process in interpersonal discussion”, arguing that a credible research description “combines in the text different interpretations and voices – even dissonant ones.” According to this principle, faithfully reproducing the perspectives of participants is not just a question of credibility but an ethical imperative of authentic representation. Participants in this study are not, after all, mere data points which more or less thoroughly corroborate each other but human beings with unique voices which deserve to be heard.

#### **Transferability: thick description and evocativeness**

Transferability is described by Barusch et al. (2011) as “a parallel term for generalisability” for qualitative research. Due to the nature of qualitative inquiry, transferability is far more complex (and controversial) a concept than generalisability, describing something more nuanced than simply repeating the study in different contexts because the context is so central to the study. This research is transferable only insofar as another researcher or practitioner could identify aspects of this study which might be suitable for their own context. To maximise the transferability of the research, a “thick description”, defined by Barusch et al. (2011) as a “deeply detailed account of one’s work” is provided. Within this thick description, I have sought to follow Heikkinnen et al.’s (2012, p.14) principle of evocativeness, which argues that “good research awakens and provokes thought about things in a new and different way”. Faithfully recording the research process is a rhetorical act, and the account ultimately has an aesthetic value along with its scientific value. Of course, the scientific value of the report is its *raison d’etre* and so should not be sacrificed for aesthetic value. Fortunately, writing is not a zero sum-game which must decide between one or the other but an open space which can contain both. I have therefore attempted to write this account as clearly, compellingly and evocatively as I could.

### **Dependability & Confirmability, audit trail & reflexivity**

Houghton et al. (2013, p. 13) argue that dependability and confirmability are closely linked, with the former referring to “how stable the data are” and the latter to “the neutrality and accuracy of the data”. As with credibility and transferability, rather than an objective and universal standard which must be met, each study must explain and account for its own dependability and confirmability. In this study, an audit trail and reflexivity provide a degree of each, though there is a certain incompatibility between the two constructs and the philosophy underpinning the study.

As with transferability, the dependability of the study is limited due to the “stability” of the data being contingent upon the context of the research process as a whole. Through thick description and an audit trail the process can at least be laid out transparently. An audit trail is described by Barusch et al. (2011, p. 13) as “a record of the steps taken in the process of the research project from beginning to end [which] includes decisions made along the way that help illuminate and detail the entire process.” In laying out the trajectory of this study, this entire chapter functions as one form of audit trail, as does section 3.2 in outlining the development of the LEAP programme. The coding database within NVivo is another form (see Appendices D & E), tracing the development of the data analysis over the course of the study and showing the construction of the findings from the textual level up.

Reflexivity is an overarching value in participatory critical action research, as discussed in section 4.5. Within the context of confirmability, reflexivity is crucial to considering the researcher’s role within the study, and how their ideology, intuitions and interpersonal relations with other participants impacted the study. While there is no such thing as neutral data, this does not mean that all interpretations are equally valid or that one should not bother trying to avoid bias. There is a difference between a biased distortion of the research and a researcher’s legitimate individual interpretation informed by their perspective in life and within the study. As with all other aspects of qualitative research evaluation, though, there is no clear and incontrovertible border between the two, and reflexivity cannot guarantee a sufficiently rigorous process. By being “aware of the fact that the story has been created by him/her”, though, Heikkinnen et al. (2012, p.12) believe that a reflexive researcher can give a transparent and comprehensive account of their role in the research process, allowing readers to make an informed judgement on the confirmability of the findings.

## Workability

Workability is distinctive to action research approaches, as it is perhaps more rooted in the action than the research. Heikkinnen et al. (2012, p.14) point out that any evaluation of action research “must pay attention to whether it has given rise to changes in social actions.” On the micro-scale of the lives of stakeholders, the issue of actual change is fundamental to this research and central to many of the research questions. I believe that there has been real change as a result of this project, and the findings which will be outlined in the next chapter show how participants in the LEAP programme, their parents and their teachers perceive this change. The continuation of the LEAP programme beyond the conclusion of this study is another important proof of the study’s workability- at time of writing (December 2019) the programme is still running. On the larger scale of the local community this study is not equipped to say whether social change has taken place, mirroring the critique of action research discussed in section 4.3.3.

## 4.6 Dissemination

The final consideration in the research design process is dissemination, the sharing of the study with different audiences for different purposes. For a doctoral dissertation, the most immediate audience is the *viva voce* committee, itself a surrogate for the wider academic community and the standards it demands. While this advance screening, so to speak, is an integral part of the research process, it is hoped that it will not be the end of this study’s life. The “workability” of this project as discussed above could be considered the dissemination of the action aspect of this project, an important outcome for the practical impact of this project. On the research front, this study will hopefully inform future practice within CTYI and perhaps offer inspiration or guidance to researchers and practitioners in other contexts. As part of a growing body of knowledge, much of it generated through CTYI, on the needs and experiences of high ability students in Ireland, and particularly in the immediate environs of DCU, it is also hoped that this project will add to the momentum for addressing the needs of these students within the mainstream education system as well as outside of it.

## 4.7 Ethical Considerations

As the students from disadvantaged backgrounds at the centre of this project were, in many ways, a doubly vulnerable population, ethical considerations were central to the design and execution of the programme. Ethical approval for the project was sought from the DCU Research Ethics Committee and received following the implementation of suggested changes to some of the data collection instruments (see Appendix A). Informed Consent from parents and Informed Assent from students based on a Plain Language Statement about the research were sought before each round of data collection. Details of why the research was being done, how data would be gathered and how confidentiality would be protected were included in the Plain Language Statement. Contact details to request more information or findings from the study once completed were also provided.

In the Plain Language Statement, the Informed Consent/Assent and again verbally at each phase of data collection it was reiterated that students were under no obligation to take part in the research, and that their place on the programme would not be jeopardised should they decide that they no longer wished to take part in the research.

Beyond these formal procedures, the fifth and sixth principles of critical participatory action research outlined by Kemmis (2008) were at the heart of the action and the research carried out for this project. These principles argue that critical participatory action research “v) has the “practical aim of acting rightly (in terms of moral appropriateness) and with wisdom (based on critically-interpreted tradition and experience) and prudence” and (vi) has the “emancipatory aims of eliminating, as far as possible, character, conduct or consequences that are untoward, distorted, destructive or unsustainable” (Kemmis, 2008, p. 135). In running the LEAP programme I was guided by CTYI’s policies on child safety and wellbeing, and all staff hired as instructors or as teaching assistants received training on following these policies in the classroom.

The wellbeing of participants was also prioritised throughout the research process. Although information about students’ individual socioeconomic background would have deepened this analysis, it was not sought in the data collection instruments for this study. The primary reason for this was that I felt that asking such a question could cause discomfort to students or their parents. During a programme which was focussed on celebrating their academic ability and encouraging their passion for learning, I did not want



to turn their attention to a potentially sensitive topic. The effects of encountering such a topic while participating in research can have adverse consequences for participants (particularly those from vulnerable populations) that far outweigh any potential benefits to the research (Barbour, 2008).

While no research participant was asked about their socioeconomic circumstances and the issue came up only once in the student questionnaires (see section 5.4.3.2) and not at all in the student group interviews, the economic constraints on opportunities for their children were articulated by multiple parents within the parent group interviews. Richie & Lewis (2003) suggest that shared experiences among the group can lead to a fruitful and supportive conversation, and I felt that to be the case in these instances. The good rapport developed leading up to and at the start of these group interviews and the mutual respect shown throughout the group were key to creating an atmosphere where such topics could be discussed (Richie & Lewis, 2003).

Finally, in order to protect participants' confidentiality, all responses presented within this study are anonymised. The questionnaires were stored securely in a locked cabinet in the CTYI offices while the recordings and transcriptions of the group interviews were stored on an encrypted USB drive which was stored in the locked cabinet.

## 4.8 Conclusion

The findings outlined in the next chapter are only as strong as the research design used to generate them, and so this chapter has outlined the development of this study from its conception through the stages of research question generation, data collection, data analysis and data evaluation, providing a thorough and transparent account of how this research was carried out and why it took the form it did. Important background factors like the philosophy underpinning this study and the experiences, beliefs and values I brought to my position as a researcher in the project are also included as they too inform the project's evolution. The next chapter foregrounds the voices of students taking part in the programme, as well as their parents and teachers, but it remains a narrative I have constructed from the data I collected rather than simply the voices of these participants. In laying out a step-by-step account of how this narrative was constructed the goal of this chapter is not to argue that this is the only valid narrative, but instead that it is a narrative

which was constructed legitimately from the collected data and which best expresses the meaning of that data.

# Chapter 5: Findings

## 5.1 Introduction

In this chapter the findings from the qualitative data collected for the study will be laid out, while in-depth analysis will be reserved for the next chapter. The findings are organised around the central tenet of student experiences of the LEAP programme, and thus the research aspect of this project is focussed on the impact of its action in the real world and on real students. Within this framework, the data is organised into three themes- Impact of Programme, Love of Learning and Programme Design. The research questions driving the study suggested points of focus within these experiences, and these loci became the themes Impact of Programme and Programme Design. Even within these preconceived areas of inquiry, however, the analysis was guided by the data itself rather than forced to fit a predetermined schema. The other theme, Love of Learning, arose entirely from the words of the research participants themselves. Of course, the responses thus collected did not collect themselves, nor was I a passive conduit allowing the voice of the participants to speak through me. They were collected and are here presented by me to create an account of this study- as indeed were the responses which constitute the other two themes. This account is, I believe, faithful to the data of which it is composed in the sense that it gives a thorough representation of students' experiences on the LEAP programme which describes the ways in which these experiences were meaningful and, where appropriate, gestures as to why this was the case. It is an account of the data collected by this study, and it aims to be a truthful and accurate one. Figure 5.1 presents a summary of of the three themes and their components.

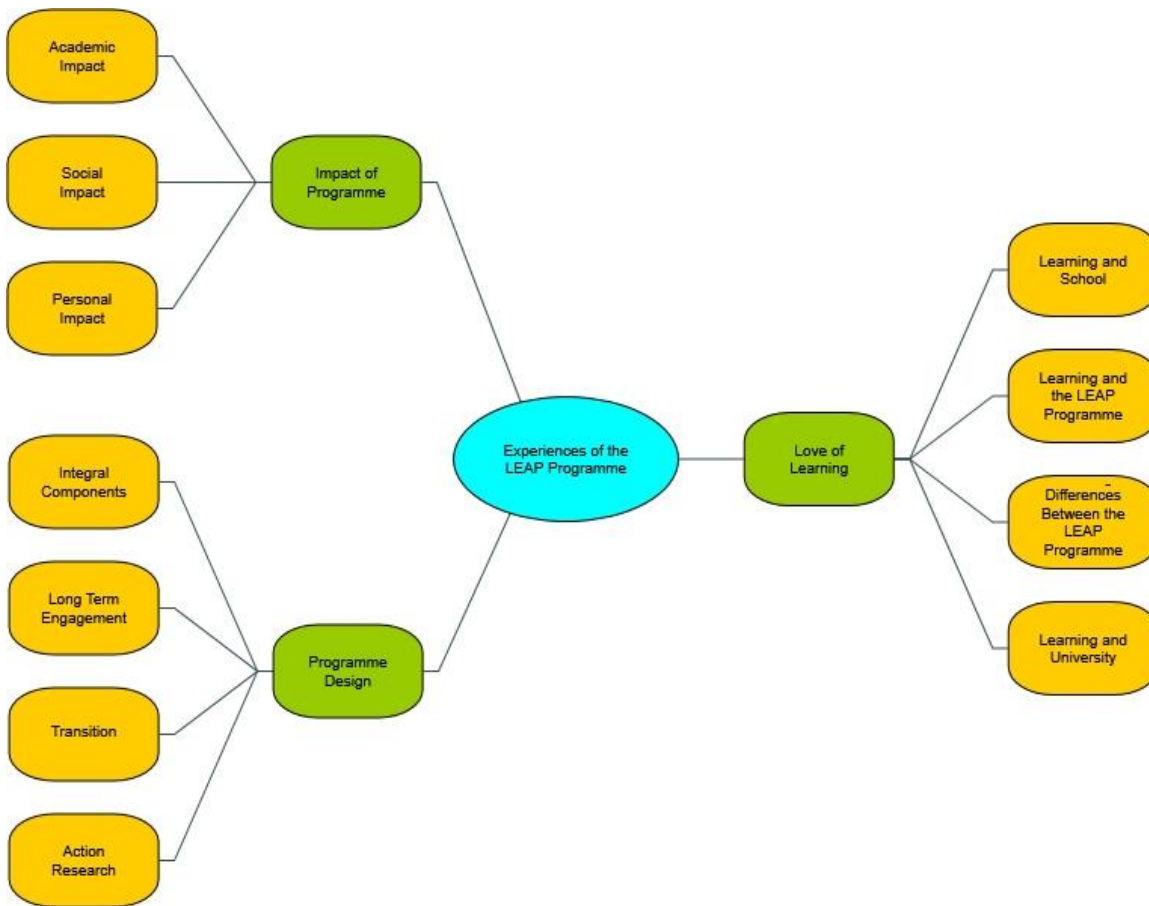


Figure 5.1 Overview of the themes outlined in this chapter

It does not, however, claim to be the only possible truthful and accurate account. As discussed in the previous chapter, qualitative analysis requires active and unavoidably subjective interpretation by the researcher, and so these codes, sub-themes and themes are not the only way of reading the data. Each of the themes contains multiple sub-themes made up of the codes which best fit within the overall meaning of that theme- for example the code “Instrumental Academic Content” is a significant aspect of the Impact of Programme code. It is placed in this theme rather than the Love of Learning code as the responses thus coded referred to the utility value of things students have learned on the programme rather than attaching an intrinsic value to the process of learning. This chapter is the result of myriad such decisions, all arrived at after deep consideration and critical reflection and all deeply rooted within the collected data. The breadth and depth of data collected were substantial and diverse enough that the narrative presented herein is not a smooth and straightforward one, but it is a rich and nuanced account of rich and nuanced experiences. Tables 5.1, 5.2 and 5.3 show the data collection from each cycle of the study.

**Table 5.1 Summary of data collection, Cycle 1.**

<b>Cycle 1</b>					
<b>Student Questionnaires</b>	Start of July Term 2016 N = 26	End of July Term 2016 N = 24	1st Autumn Workshop 2016 N = 11	Start of Spring Term 2017 N = 18	End of Spring Term 2017 N = 12
<b>Student Group Interviews</b>		End of July Term 2016 N = 4			End of Spring Term 2017 N = 4
<b>Parent Group Interviews</b>		End of July Term 2016 N = 4			End of Spring Term 2017 N = 5
<b>Secondary School Teacher Questionnaires</b>					End of Spring Term 2017 N = 2

**Table 5.2 Summary of data collection, Cycle 2.**

<b>Cycle 2</b>								
<b>Student Questionnaires</b>	Start of Spring Term 2017 N = 53	End of Spring Term 2017 N = 44	Start of July Term 2017 N = 34	End of July Term 2017 N = 35	Start of Autumn Term 2017 N = 47	End of Autumn Term 2017 N = 42	Start of Spring Term 2018 N = 31	End of Spring Term 2018 N = 25
<b>Student Group Interviews</b>		End of Spring Term 2017 N = 8						End of Spring Term 2018 N = 3
<b>Parent Group Interviews</b>						End of Autumn Term 2017 N = 2		
<b>Primary School Teacher Questionnaires</b>			Pre-July Term 2017 N = 6					
<b>Secondary School Teacher Questionnaires</b>								End of Spring Term 2017 N = 3

**Table 5.3 Summary of data collection, Cycle 3.**

<b>Cycle 3</b>								
<b>Student Questionnaires</b>	Start of Spring Term 2018 N = 38	End of Spring Term 2018 N = 27	Start of July Term 2018 N = 9	End of July Term 2018 N = 8	Start of Autumn Term 2018 N = 15	End of Autumn Term 2018 N = 12	Start of Spring Term 2019 N = 12	End of Spring Term 2019 N = 10
<b>Student Group Interviews</b>		End of Spring Term 2018 N = 4		End of July Term 2018 N = 3		End of Autumn Term 2018 N = 3		
<b>Parent Group Interviews</b>		End of Spring Term 2018 N = 2		End of July Term 2018 N = 2				
<b>Primary School Teacher Questionnaires</b>			Pre-July Term 2018 N = 5					

Before beginning this account of students’ experiences of the LEAP programme it is vital that we recognise the diversity of these experiences. While all students were identified under the same criteria, took part in the same programme and attended schools designated as disadvantaged by the DES, each brought their own unique experiences, desires and motivations into the classroom each term. No data were collected on each individual student’s socioeconomic status, but over the course of the study I spoke to parents who had not completed secondary school, parents for whom even the scholarship rates for the secondary school programmes were too much to pay and parents who had migrated to Ireland from all over the world. In the context of this study, therefore, educational disadvantage was not a monolithic force acting equally on all students but a constellation of factors constructed of shared experiences but ultimately unique to each individual. Similarly, while each student was identified as a high ability student by their primary school teacher, student scores in the Talent Search showed a wide range of ability in

quantitative and qualitative reasoning. Some students' scores in the Talent Search would qualify them for almost any gifted programme- CTYI qualifiers above the ninety-fifth percentile in one or both areas. Others' scores were at the eightieth or seventy-fifth percentile and thus high ability in the general sense but unlikely to be identified in most gifted programmes. Several twice exceptional students were identified, students whose high academic ability was coupled with dyslexia or Autism Spectrum Disorder. "High ability" in this study, therefore, was a capacious construct, one which contained a broad spectrum of academic aptitude.

Individual differences across the two central areas of this study, educational disadvantage and high ability, as well as across the rest of students' lives gave depth and nuance to each of the three themes identified and this account will endeavour to reflect this complexity. It will do so by taking seriously the words of students themselves both as they express individual experiences and as they reveal trends and shared perceptions. It will begin by considering the Impact of the Programme on students, as articulated by the students themselves, their parents and their teachers.

## 5.2 Impact of Programme

From the very beginning of this project, the LEAP programme was designed to effect positive change in students' lives, and my research was designed to investigate whether it succeeded. The first four research questions focus entirely on the impact of the programme on participants:

- ❖ Do students feel that they benefit from taking part in the course?
- ❖ How do they perceive and describe these benefits?
- ❖ Do other significant figures (teachers and parents) in the student's life feel they benefit from taking part in the course?
- ❖ How do they perceive and describe these benefits?

The most important result of this study, both as a finding from its research aspect and as a concrete change to the world as a result of its action, was the broad and generally positive impact the programme had on participants. This impact was captured by the Impact of Programme theme, split into three sub-themes: Academic Impact, Social Impact and Personal Impact. As noted in the introduction to this chapter, different students brought



different things to the LEAP programme and, inevitably, different students took different things from it as well. Some of the impacts were mentioned by many research participants, some were even near universal, while others appeared only once or twice. The criteria for establishing significance for this study are fundamentally qualitative, and gesturing to how often particular perceptions were articulated is intended to contextualise them rather than assert significance in and of itself. It is also important in terms of presenting a transparent account of this research, and showing that I am not simply cherrypicking statements to create a narrative. Instead, the narrative I am creating (and all research is, ultimately, a narrative imposed on raw data) is one built entirely from what was said, how it was said and how often it was said by LEAP students, their parents and their teachers.

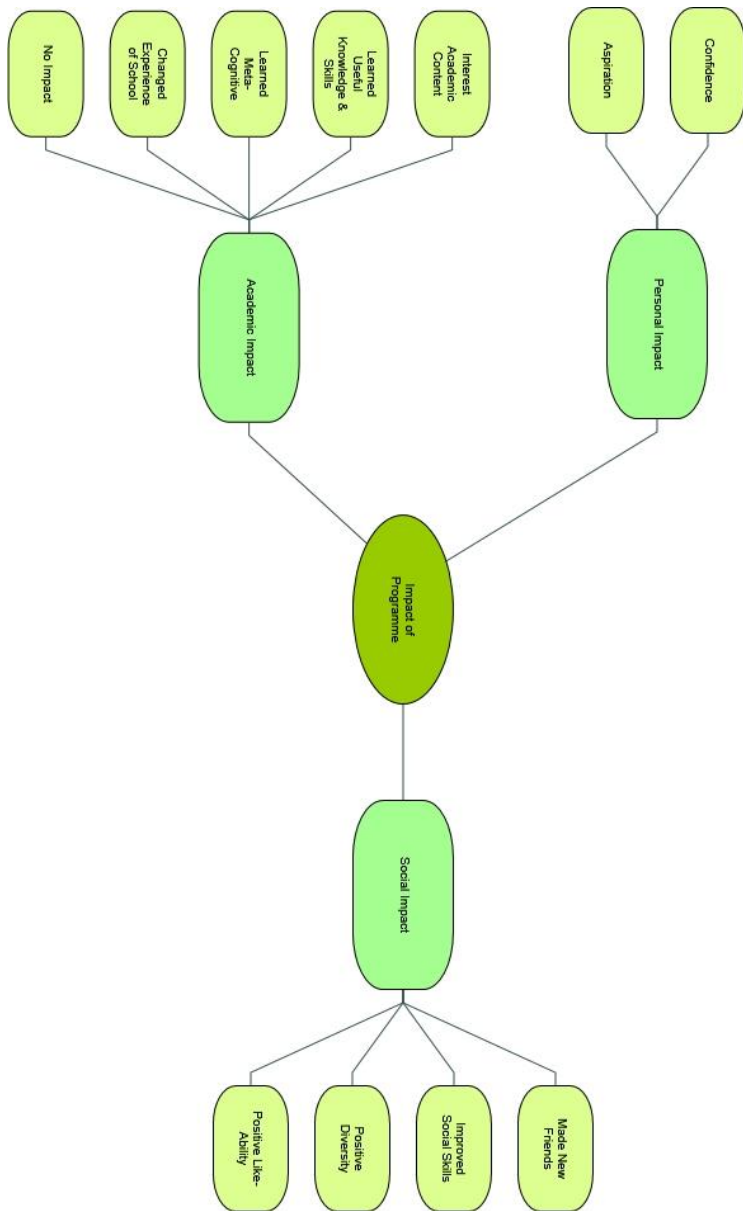


Figure 5.2 Impact of Programme theme

## 5.2.1 Academic

Academic benefits were the most commonly reported impact of the LEAP programme, which is little surprise given its overall academic focus. One aspect of these benefits, covered by the code Interest Academic Content, related to the academic content which students took from the course which students perceived as beneficial in its furthering of their interests. As the content of this code overlapped almost entirely with the codes which will be explored from the perspective of the Love of Learning theme (see section 5.3), it will not be covered here. This section will focus on the other code within this sub-theme, Impact in School which framed the academic impact of the course in utilitarian rather than intrinsically valuable terms, and in turn was composed of four sub-codes- Learned Useful Knowledge and Skills, Learned Meta-Cognitive, Changed Experience of School and No Impact.

### 5.2.1.1 Learned Useful Knowledge and Skills

While the LEAP programme was designed to cover different material in a different way to school, a significant portion of responses (from both parents and students) nonetheless referred to its positive impact on students' schooling in terms of the knowledge and skills students learned from the LEAP programme and brought into their normal classroom:

“Well I love secondary more than I liked primary because I like all the new subjects and then it's more like this year. And then primary school was a bit... not boring but it was just a bit slow paced. And I think secondary school is a bit more fast paced and better. And I think your programme has helped a lot because I know a lot of the words and the writing is really quick now. And also from business I know all this journalism stuff and that helps a lot as well.” (Cycle 1 Spring 2017 End Student Group Interview)

“In history we were talking about ways to punish people back then and I did the crime and punishment course so I knew loads” (S130, Cycle 2 Spring 2018 Initial Questionnaire)

Learned Useful Knowledge and Skills also appeared in the parent group interviews and teacher questionnaires:

“Yes, absolutely, I can tell her writing skills, I can see how it’s interacting with her school, in English especially, how it helps her to do her tasks in school on a daily basis.” (Cycle 1, Spring 2017 End Parent Group Interview)

“They have brought up a few things in various classes which they had already covered with the LEAP programme” (T(S)01, Cycle 1 Secondary Teacher Questionnaire)

Other responses spoke of the benefit of the LEAP programme to specific subjects in school as more of an overall reorientation of the student’s attitude towards a subject than as the acquisition of particular skills or knowledge:

“I find after doing this programme I understand science in school easier” (S107, Cycle 2 Spring 2018 End Questionnaire)

This impact was also observed within parents’ comments, indicating a broad agreement around the benefits to school-based learning :

“1: [Student] has just realised really that maths is not as hard as she ever thought it was anyway, that it can be fun, that it’s interesting and that’s her word, not mine, interesting. She’s interested in it. I think it’s basically now when she’s older. She struggled with maths as a very young child. That’ll help her out with it. She moved on and never looked back. She likes it now so.” (Cycle 1 July 2016 Parent Group Interview)

Within the Learned Useful Knowledge and Skills code I observed that many students phrased the benefits of what they learned from the LEAP programme not just in absolute terms but also relative to the rest of their class in school. Responses which did so were grouped together under the sub-code Head Start. Some of the Head Start responses framed the head start students got from the programme purely in terms of giving them an advance look at specific classes in school:

“It taught me things before my teacher at school did so that made it easier” (S28, Cycle 1 Spring 2017 End Questionnaire)

“I'm a tiny bit ahead in maths thanks to the maths course” (S131, Cycle 2 Autumn 2017 End Questionnaire)

Other responses took a more long term view of the head start, speaking of how the LEAP programme moved them closer to their long-term goals:

“I loved the summer programme last year, it has helped me alot in school. And I plan to be a teacher later in life, So this is like a head start” (S29, Cycle 1 Spring 2017 End Questionnaire)

More of the responses, however, painted the head start as an advantage students gained over other students in their class rather than simply prior familiarity with new subjects:

“It is because doing these courses are not something that everyone can do. So it's good to learn it and understand more things than others” (S107, Cycle 2 Spring 2017 End Questionnaire)

“I know things that other people in my class don't know” (S110, Cycle 2 Spring 2018 End Questionnaire)

“I have learned things in some subjects before everyone else and I feel that it has got me confidence a little bit when talking in groups” (S155, Cycle 2 Spring 2018 End Questionnaire)

I have found Head Start the most challenging code to interpret in terms of the wider context of the LEAP programme: it describes a straightforward benefit of the programme at the level of the individual student taking part but raises wider questions about the goals of the LEAP programme when a wider perspective is taken. The goal of the LEAP programme is to give students a chance to engage with material they otherwise would not encounter- almost inevitably this will be material which students in their class have not engaged with. The programme also hoped to yield academic benefits to participating students, and any such benefits would be both absolute and relative to their peers. Yet seeing the responses which explicitly spoke of the LEAP programme advantaging students over their classmates forced me to confront some deep-rooted questions over what the

LEAP programme was aiming to do, and what it was ethically acceptable for it to do, beyond the individual level. A full discussion of these questions requires more space than is available here, and also incorporates aspects of all three themes identified in this chapter, and so we will return to the question of the head start in section 6.4 of the discussion chapter. Before moving on, there are three individual responses within the Head Start code which bear looking at for their potential to help answer these questions later on.

One of these responses pointed to the link between the perceived head start in school and student confidence. Confidence was a code in its own right within the Personal sub-theme of the Impact of Programme theme and will be discussed in section 5.3.3, and this link will be observed again and further developed there. In relation to the Head Start code, it provides an interesting insight into how the sense of being ahead of classmates impacted students:

“Because some of the things we do in the courses show up in school and no one knows about them except you and you do feel real smart in all” (S111, Cycle 2 Spring 2018 End Questionnaire)

One student, at least, was determined to use their new powers for good, and showed that the individual academic benefits students derive from the LEAP programme could create a ripple effect beyond participating students:

“If we're learning about what I've learnt in school I can help others who were stuck” (S116, Cycle 2 Spring 2018 End Questionnaire)

Finally, one response showed that the head start could be helpful not just in reorienting the students' own relationship to a subject but in changing others' minds about what the student was capable of as well.

“It has helped me a lot in maths. I done the maths course last year, And I am ahead of everyone in my class. The year head told me I might be doing higher level maths for Junour Cert. And I've been getting A's in English.” (S29, Cycle 1 Spring 2017 End Questionnaire)

The other two codes within this sub-theme were far less common than Learned Useful Skills and Knowledge, but each captured something which may ultimately have a far greater impact on students' educational experiences than the specific content they were able to transfer from the LEAP programme to their schools.

### 5.2.1.2 Metacognitive Skills

The first of these codes, Metacognitive Skills, was assigned to responses which spoke of the programme providing students with new ways of thinking or learning which they could incorporate across environments and subjects. Metacognition, perhaps unsurprisingly, was not part of the vocabulary of these 1st year students, and the responses coded under Metacognitive Skills reveal students struggling to articulate what they mean in a way they did not struggle in the Learned Useful Skills and Knowledge code. Nonetheless, the responses do make clear that some students, at least, derived metacognitive benefits from the LEAP programme:

“I guess it helped me to find the best way to learn” (S13, Cycle 1 Spring 2017 Initial Questionnaire)

“It's taught me to always overthink and look for a different easier yet simple way” (S122, Cycle 2 Spring 2018 Initial Questionnaire)

“It's caused me to think of different ways to do stuff we learn in school” (S122, Cycle 2 Spring 2018 End Questionnaire)

While the Metacognitive Skills code applied to only a small number of responses across the whole range of data collected, and two of those responses were from the same student, it is nonetheless interesting in relation to the field of high ability studies more generally, where the explicit teaching of Metacognitive Skills is often called for but rarely actualised (see section 6.4.1). It is also significant in capturing something which may profoundly change students' lives by improving their ability to learn across multiple contexts. The next code, Changed Experience of School, was similarly rare in the data but potentially powerful for those students who did report it.

### 5.2.1.3 Changed Experience of School

Four responses were coded under Changed Experience of School as they described the LEAP programme as altering how students thought about school overall. Three of these were positive:

“Made school more positive” (S04, Cycle 1 Spring 2017 End Questionnaire)

“I improved in science and was more interested in class” (S126, Cycle 2 Spring 2018 End Questionnaire)

“I like school more and I know someone is noticing my level of knowledge in school” (S154, Cycle 2 Spring 2018 Initial Questionnaire)

The latter response is especially interesting as it suggests that the student had previously felt unseen in their ability. Whether they feel that their knowledge is now being noticed because they have been able to use knowledge from the LEAP programme in class or simply because their school knows they are on the programme, the recognition of their talent has changed their overall enjoyment of school for the better. The fourth response coded under Changed Experience of School, however, was somewhat more ambiguous than the three above:

“I feel like I notice how unchallenging [school] is, I dunno” (S236, Cycle 3 Spring 2019 End Questionnaire)

It is not clear from the response whether the student perceives this as a positive or a negative outcome. Interestingly, in the same questionnaire (completed at the end of the student’s final LEAP term, Spring 2019) the three words they said best described how they felt about school were “Important, educational, flawed” (S236, Cycle 3 Spring 2019 End Questionnaire), suggesting a deep ambivalence towards school even as they were overwhelmingly positive about the LEAP programme. Notably, the student’s answer to the same question at the end of the previous Autumn term was “Knowledge, energetic, fun” (S236, Cycle 3 Autumn 2018 End Questionnaire), a far more straightforwardly positive



appraisal. It seems likely that the change in perspective was due to both the student's experience of the LEAP programme and their experience of school itself over the intervening four months rather than the result of either by itself. On the one hand, a dampening of the student's enthusiasm for school is clearly a negative impact. On the other hand, if the student is genuinely not being challenged in school then having an outlet for academic energy and a contrast through which to understand that they are capable of more advanced work is a positive impact for the student generally, even if it does not directly translate into a school context.

#### 5.2.1.4 No Impact

While most students pointed towards positive academic impacts from the LEAP programme, there were students who felt that the programme had not had any impact on their school lives. Most of the responses coded under No Impact were based on the perceived lack of direct transferability of skills and knowledge from LEAP courses to school classes:

“It kind of has/hasn't, I know alot more but not in what I learn in school” (S25, Cycle 1 Spring 2017 Initial Questionnaire)

“I just didn't learn anything in DCU that has come up in School” (S187, Cycle 2 Spring 2018 Initial Questionnaire)

“I just have not found a way just yet” (S221, Cycle 3 Spring 2019 End Questionnaire)

One student framed this lack of common ground in almost adversarial terms:

“Most of the courses I take don't do nothing according to school” (S153, Cycle 2 Spring 2018 Initial Questionnaire)

This student felt strongly negatively about school in general, with the three words they said best described how they felt about school being “Stressing, depressing, gives you a mental breakdown” (S153, Cycle 2 Spring 2017 Initial Questionnaire). Such negative sentiment towards school was rare among participants in this study, who generally felt mildly or

strongly positive about it. In the same questionnaire as the above responses, the student expressed mildly positive sentiments towards the LEAP programme due to both the social and academic sides of the classes. These positive sentiments, however, did not improve the student's feelings towards school, showing the limits of the impact a part-time programme can have on full-time education.

### 5.2.2 Social Impact

While the academic benefits of the programme were the most widely noted, the social side of the programme also featured prominently in evaluations of the programme. The responses which addressed the social aspect of the programme were split into two codes: Impact and Experience, although many responses fit into both categories. Only the Impact code will be considered in depth here. With regard to responses coded under Experience, the vast majority were positive:

“The group I was with were nice and the teacher was super kind” (S221, Cycle 3 July 2018 Initial Questionnaire)

“ It was fun. We laughed a lot.” (S130, Cycle 2 Autumn 2017 Initial Questionnaire)

“I learned alot! Every was also so helpful and kind! :)” (S154, Cycle 2 Spring 2017 Initial Questionnaire)

There were only a handful of negative responses, but they illustrated even more strongly how important the social side of the programme was. Students whose responses were coded as Negative Social uniformly did not enjoy the programme:

“I don't really know anyone and I don't really like the subject” (S31, Cycle 1 Spring 2017 Initial Questionnaire)

“Just don't like because have no one to talk to or any of that” (S187, Cycle 2 Spring 2018 End Questionnaire)

A programme catering for a large group of 11-14 year olds is never going to satisfy everyone socially, but the Negative Social shows that a good classroom atmosphere and

the encouragement of new friendships should be as central to an out of school enrichment programme as advanced academic content.

Within the Social Impact code there were four different codes which we will now consider in detail - Made New Friends, Improved Social Skills, Positive Diversity, Positive Like-Ability.

### 5.2.2.1 Made New Friends

This was the largest code within the Social Impact sub-theme and included all responses which mentioned meeting new people and making new friends as a positive aspect of the LEAP programme. Responses within this code were generally very straightforward, though they often included an academic benefit alongside the social one:

“I learned new stuff and now I have new friends” (S114, Cycle 2 Spring 2017 End Questionnaire)

“The experiments were fun and I met new people” (S189, Cycle 2 July 2017 End Questionnaire)

“Because it is always fun to get involved meet new friends, plus it helps me in school” (S132, Cycle 2 Autumn 2017 Initial Questionnaire)

Parents also observed this positive social impact:

“1: [Student]’s enjoying meeting new people, different places. [Student] came home and you knew she was enjoying it.” (Cycle 1, July 2016 End Parent Group Interview)

Made New Friends straddled the border between Social Impact and Social Experience, making it a difficult code to categorise. Ultimately the responses which showed that the new friendships were not confined to the course but extended into students’ wider lives convinced me that this was an impact which lasted beyond the classes rather than an experience within them:

“Last summer I did experimental science and I learned stuff that I do in science today. Some of my friends go to the leap programme and now we go to school together” (S153, Cycle 2 Spring 2017 End Questionnaire)

From the parent perspective, the enduring friendships students made on the LEAP programme were seen as grounded in both the fact that there were future classes where they would see each other in person again and the opportunity for maintaining friendships through digital means in the meantime:

“1: It is, it’s fantastic. But they’ve learned to interact with other children, you know, their peers like, in the classroom, it’s nice for them to meet new people.

4: To make new friends.

1: Exactly, I’m sure they’re all after exchanging their facebook or their emails or the phone numbers, that’s fine but, it’s nice that they can come here as well and we know that they’re ok here as well.” (Cycle 1, July 2016 End Parent Group Interview).

All educational programmes are ultimately social experiences as well as academic ones, and the friendships forged on the LEAP programme were strongly valued by students themselves. Yet the importance of creating an atmosphere conducive to such friendship formation is often assumed rather than stated explicitly by academic accounts of studies like this one. This study will not be so reticent- as well as highlighting the fruits of such an atmosphere here, the discussion in section 6.4.2 will further explore the importance of focusing on students’ social experiences as well as their academic experiences.

#### 5.2.2.2 Improved Social Skills

As the SCAT Qualitative Reasoning section might put it, Improved Social Skills: Made New Friends :: Metacognitive Skills: Learned Useful Skills and Knowledge. In other words, much as some students noted that they had not only learned material but also how to learn, some students felt that, as well as actually making new friends on the programme, they improved their social skills by taking part in the programme:

“I feel like it has given me an opportunity to know something I need for secondary and I met new people here and it got me used to meeting new people” (S189, Cycle 2 Spring 2018 Initial Questionnaire)

Parents also noted this social impact, and multiple parents remarked that this was particularly valuable for students as they entered secondary school, a time when students would meet new people and (hopefully) make new friends:

“1: Thoroughly enjoying it. Meeting new people as well, you know. Especially with the introduction to secondary this year so it mimes kind of the light way introducing them to new people. [Student] is having a ball anyway, and so’s [Student], he’s having a ball as well.” (Cycle 1, July 2016 End Parent Group Interview)

“1: Yeah, [Student]’s, as I was saying to you inside [Student] kinda struggles a little bit socially in primary school at the moment, he’s not sporty and stuff like that, he’s more the academic side, so he’s looking forward to secondary as a new fresh start so that’s what we’re kinda hoping for, the same. So this has been a good starting point so we’re saying this is another level now from primary school and you’ve got on brilliant so let’s hope secondary will be the same.” (Cycle 3, Spring 2018 End Parent Group Interview)

### 5.2.2.3 Positive Diversity

Responses which described the LEAP programme as a place to meet people from different places and backgrounds were coded under Positive Diversity. Both students and parents noted the value of meeting a range of people on the programme:

“ 3: I liked socialising with other people because it got us to make more friends from different parts.” (Cycle 1, July 2016 End Student Group Interview)

“1: It’s the people for me. Yeah. It expands their world. There’s people there from where [name] lives, there’s people there from where Gran lives, there’s people there from [place in Dublin 15]. I think to realise as well because her school is a very tiny school anyway so there’s only locals. There’s only 14 in her class so it’s

tiny, tiny and going into a secondary school which will have students from different areas also, this is kind of her introduction to okay, there are people from different areas. Even her music programme is all based around [local area] music programme, National Concert Hall so it's all the same people constantly.” (Cycle 1, July 2016 End Parent Group Interview)

Interestingly, it only appears in responses from students in primary school and their parents, suggesting that the LEAP programme looked less diverse in comparison to their larger secondary schools. As the parent response above points out, experiencing this diversity in the LEAP programme before secondary school may have had a positive impact on students' experience of the transition.

#### 5.2.2.4 Positive Like-Ability

While the Positive Diversity code focussed on the benefits of sharing a class with people different from oneself in various ways, the final code within the Social Impact related to the benefits of sharing a class with people similar to oneself in one particular way. Positive Like-Ability was composed of responses which indicated that being in a class with other high ability students had had a positive impact on the student. Although the relative homogeneity of the classes in terms of ability was one of the defining characteristics of the LEAP programme compared to normal school classrooms, it was remarked upon in just a single student questionnaire:

“You work in a group with bright people” (S229, Cycle 3 Spring 2018 End Questionnaire)

Homogenous ability grouping is central to the design of high ability programming almost by definition. It is interesting, therefore, that it was so little remarked upon by students as a positive feature of the LEAP programme. The possible reasons for and implications of this will be teased out in the next chapter, but first it is worth looking at the perspective provided by others in the students' lives. While students may have been more interested in other students' likeability than their like-ability, parents and teachers were much more emphatic about the positive impact of being in a classroom full of high ability students:

“How do you feel about the kids being in a class of people of their own very high ability and mixing with other students who’d be equally academically able as them?”

1: I think it’s fantastic

4: It’s great, this is what we want.

1: Because clearly they’ll strive, they’ll always, constantly strive.

2: Yeah, they will strive to be-

4: And they click, they understand each other better

1: Exactly, they have a different level of understanding with each other I don’t notice in other school.” (Cycle 1, July 2016 End Parent Group Interview)

“Being surrounded by other children at their level encourages them to show their strengths and do their best” (T(P)104, Cycle 2 Primary Teacher Questionnaire)

The different perspectives within the Positive Like-Ability code offered by students on the one hand and by their parents and teachers on the other show the value of triangulation, but also the need for caution in presenting different views on the same phenomenon. For a variety of reasons which will be fully explored in section 6.4.2 of the discussion, I believe that parents and teachers are articulating something from students’ lives which the students themselves did not express. There is, however, the possibility that they are instead imposing a narrative on the programme which is not borne out by student experiences. Taking the findings within the Social Impact sub-theme as a whole, the social benefits of the programme articulated by many students show that the experience of being in a classroom with other high ability students has been a strongly positive one. Whether the relationship between the homogenous grouping and the positive experience is causal or merely correlational is not clear from the data. What is clear, however, is that the LEAP programme had a positive social impact on students’ lives, one which stretched beyond their involvement on the programme itself.

### 5.2.3 Personal Impact

Beyond the academic and social impacts of the programme, a number of responses referred to the programme helping students on a wider personal level. These responses were grouped together in the sub-theme Personal Impact. Within this sub-theme, two codes were identified: Confidence and Aspiration. Fewer responses were coded under Personal Impact

than either Academic Impact or Social Impact, but those that were suggested that the impact was significant for the student's whole life, especially within the Confidence code.

### 5.2.3.1 Confidence

While the academic and social benefits were widely articulated by students themselves, very few student responses were coded under Confidence and those that were tended to show an increase in confidence rather than explicitly talking about it:

“It makes me feel smarter! And I learned a lot, it was so much fun!” (S154, Cycle 2 Spring 2017 End Questionnaire)

“Because some of the things we do in the courses show up in school and no one knows about them except you and you do feel real smart in all” (S111, Cycle 2 Spring 2018 End Questionnaire)

There was a strong link between the perception that students had received an academic head start from the LEAP programme and their expression of greater self-confidence as a result of attending. If we consider this link in terms of the Favourite Subject findings which will be discussed in section 5.3.2.1, we can see how mastery, interest and confidence interact within each student, something we will consider from a systemic perspective in the next chapter. Beyond the impact on confidence of students' experiences of the content of the course, there were numerous responses coded under Confidence which presented the LEAP programme as a focal point through which other people in the student's life bolstered their confidence by affirming the student's ability in relation to their selection for and participation in the programme:

“Yes because my friends and family say I'm well able and they know I love doing it” (S209, Cycle 3 Spring 2018 Initial Questionnaire)

“My teacher, he said that I'm capable of doing it” (S242, Cycle 3 Spring 2018 Initial Questionnaire)



The very fact of having been identified as able for and deserving of a place in the programme was also highlighted by parents as reinforcing students' self-confidence and especially their academic confidence:

“1: I think it's quite an achievement for children to be here, it's not just chosen randomly, they have to earn their place here and I think that they know that and because of that it drives them forward.” (Cycle 1, Spring 2017 End Parent Group Interview)

One teacher echoed this sentiment, linking the impact of identification with the impact of the classes themselves on student confidence:

“Being given the nod and going to DCU, it really tells them that they are able for anything. You can see their confidence is through the roof after the classes” (T(P)205, Cycle 3 Primary Teacher Questionnaire)

Beyond the perceived increase in students' everyday confidence, the programme also had an impact on their confidence in their own future, as captured by the Aspiration code.

### 5.2.3.2 Aspiration

Fostering student ambition and, especially, encouraging them to aim for a university education were both goals of the LEAP programme, and the Aspiration code gives a sharp insight into the programme's impact on these fronts. One of the most overwhelming findings of the study was that students came into the LEAP programme almost universally aspiring to a third-level education already. The programme's impact on student ambitions for the future was, therefore, less one of “raising” aspiration than one of maintaining, reinforcing and refining it. Many of the responses within this code highlighted the impact of the programme in introducing students to university learning and preparing them for challenging but interesting third-level courses:

“4: Well i definitely want to go, I was never in doubt of it. DCU has made me even more want to go to it because to see everything how it sort of would be. When I grow up I'd like to either be a professor in university or a mathematician for the government and help them.” (Cycle 1 July 2016 End Student Group Interview)

“I take part in it because I enjoy it and it lets me see what college is like and I would love to go to DCU” (S115, Cycle 2 Autumn 2017 Initial Questionnaire)

“So that when I go to college I'll already know what we have to do” (S212, Cycle 3 Autumn 2018 Initial Questionnaire)

Students also reported the value of courses in helping them to figure out what exactly to do in university by exploring various interests and sampling a range of courses:

“I really enjoy the Leap programme as it gives you a taster of real college courses and gives you an idea of what to do after school” (S208, Cycle 3 Autumn 2018 End Questionnaire)

“Because I believe this could help me learn what to do in my future life and its so fun” (S105, Cycle 2 Spring 2017 End Questionnaire)

Parents also noted the impact of the LEAP programme on student aspiration:

“Over the last year there’s just so many different subjects and courses been done that it’s going to help [Student] in the future, that she’s not going into college blind. She has an idea of what she wants to do and what she’d really enjoy to do in third level. “ (Cycle 1, Spring 2017 End Parent Group Interview)

As well as giving students ideas about what they would like to study in college and do with their lives, some students found the LEAP programme valuable in ruling out subjects and areas:

“I liked finding out behind journalism and all of the rules but I don't think I would go into journalism when I'm older” (S155, Cycle 2 Spring 2018 End Questionnaire)

Finally, there were some students who came into the courses knowing that they would like to go to university and what they would like to study there, and for many of these students this remained constant throughout their time on the programme. For some of these students, the LEAP programme was useful in giving them concrete experience with the

subject they would do in future. In many ways these responses extended the “head start” from secondary school into third-level:

“I loved the summer programme last year, it has helped me alot in school. And I plan to be a teacher later in life, So this is like a head start” (S29, Cycle 1 Spring 2017 End Questionnaire)

“Well I enjoyed it because in future I will probably know this already and I might become an engineer when I grow up” (S123, Cycle 2 Autumn 2017 End Questionnaire)

“Because I would love to get the sport science one because I'd like to be a physiotherapist” (S115, Cycle 2 Autumn 2017 Initial Questionnaire)

Overall the benefits of the LEAP programme spanned students’ academic, social and personal lives, with individual students drawing different things from their experiences of the programme. The Impact of Programme theme is of interest from a research perspective in showing what an out of school academic enrichment programme can achieve, bearing in mind the importance of local factors in any attempt to translate this potential to another context. Crucially, this articulation of potential is grounded not in abstract theory or speculative hypotheticals but in the concrete lived experiences of the real LEAP students whose words record the real impact of the programme on their lives. Beyond its significance for future research and action in the field, the Impact of Programme theme is testament to the lives the LEAP programme has touched and the positive change this project has effected in the world. Of course, this change is not something the LEAP programme has exerted on students but something students have actuated for themselves through the LEAP programme. You can lead a child to thought-fodder, as it were, but you can’t make them think. The next section will look at a quality which was vital to students getting as much out of the LEAP programme as they did, captured by the Love of Learning theme. The Love of Learning theme focuses on a passion for learning at once general across the vast majority of students and specific to particular forms of learning and contexts for learning in students’ lives.

### 5.3 Love of Learning

The LEAP programme is first and foremost an academic enrichment programme, and so it was to be expected that student experiences of the academic side of the programme would feature heavily in the data. The Academic Impact of the programme outlined in section 5.2.2 shows the extent to which students valued what they learned as useful in practical contexts- chiefly in their school classrooms. This is not, however, the full picture. Students evinced what can only be described as a love of learning which goes far beyond utility value and indeed beyond their engagement with the LEAP programme. Unlike the other two themes, the Love of Learning theme does not answer any of the research sub-questions guiding this study. This is mostly a reflection of the fact that it was not something I set out to find in the way that I set out to find the impact of the programme on students or to explore students' experiences of specific aspects of the programme. Instead, this theme grapples with the fundamental question of how students experienced the LEAP programme, and the answers it suggests are all the more striking from having arisen organically from the data. This section will explore students' love of (and desire for) learning across four sub-themes, each based on a different context in which the theme was evident. These sub-themes were The LEAP programme, School, School/LEAP Comparison and University. While the focus of this study is on students' experiences of the LEAP programme, these experiences do not happen in a vacuum, and so it is worthwhile considering a salient phenomenon which occurs across various parts of their lives.

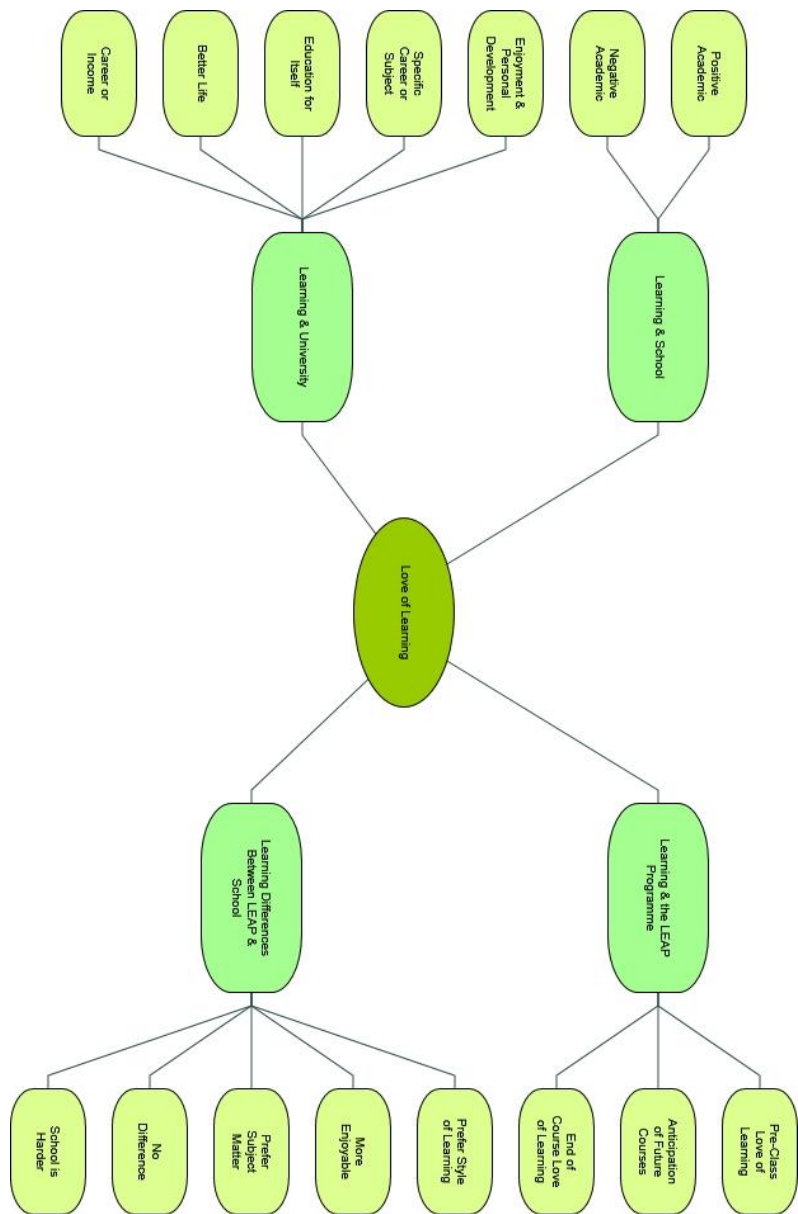


Figure 5.3 Love of Learning Theme

### 5.3.1 Learning & the LEAP Programme

Positive statements towards learning constituted the most common sentiments students expressed towards the LEAP programme from start to finish. This code includes numerous student responses from each term of each cycle of the programme, as well as responses from the parent group interviews and teacher questionnaires.

#### 5.3.1.1 Pre-class Love of Learning

Love of Learning was perhaps expressed most purely in the questionnaires given to students at the start of classes, where students generally said they were looking forward to their classes and most often because of their general love of learning:

“I take part because I learn lots of new things, its good for my education and it's fun” (S180, Cycle 2 Autumn 2017 Initial Questionnaire)

“Because it is very educational. I am learning a lot of new things” (S28, Cycle 1 Spring 2017 Initial Questionnaire)

Within this code, there were two important codes which captured more focussed positive sentiments about learning. The first of these was Specific Content, where students spoke about particular academic subjects or topics which they were looking forward to covering:

“I'm really interested in the environment and want to help it as much as I can” (S203, Cycle 3 Spring 2018 Initial Questionnaire)

“I am looking forward to it because I find the media to be interesting” (S26, Cycle 1 Spring 2017 Initial Questionnaire)

“Cause we will do alot of sciencey things and I love doing experiments and finding out new things” (S123, Cycle 2 Spring 2018 Initial Questionnaire)

The second code was Novelty, which comprised responses where students spoke positively about looking forward to a new or different type of learning than their general lives:

“I'm liking the leap programme because the courses on the programme are unique and they're good” (S15, Cycle 1 Spring 2017 Initial Questionnaire)

“I take part in it because it gives me a chance to try out things that we don't learn in secondary school” (S107, Cycle 2 Autumn 2017 Initial Questionnaire)

The hunger for new knowledge students brought to LEAP classes each term was expressed as specific to the subject on offer by some students and as a general desire for novel learning experiences by others, reflecting the diversity of academic interests among academically interested children.

### 5.3.1.2 Anticipation of Future Classes

Love of Learning as a process similarly characterised students' anticipation of future courses, and the same codes were also present in student responses to questions about their sentiments towards future courses:

“Because my knowledge has grown on science and maybe if I go again I will know more” (S153, Cycle 2 July 2017 End Questionnaire)

The anticipation of future courses was also remarked upon by parents:

“2: And [Student] has her summers planned now until she's in doing her leaving cert. She's looking forward to coming back and experiencing different things.

E: And she'll get to do 4 or 5 different courses over the years.

2: And one of them has to be biochemistry. I don't care where you pull it from, but she's determined she's doing biochemistry” (Cycle 1, July 2016 End Parent Group Interview)

Another code was also identified within Anticipation of Future Courses: Course Variety. This code encompassed sentiments towards the potential to study a range of topics in future:

“I’m looking forward to different subjects. I want to continue because it’s really fun and I love learning!” (S124, Cycle 2 Spring 2017 End Questionnaire)

Parents also appreciated the range of courses available:

“4: It’s all new, it’s all interesting.

2: It’s just giving them tastes of it. So they’re not getting bogged down by just part of it, they’re getting a good scatter.

4: Of whatever you decide to offer you know. Whatever you decide to include.

2: it’s great that you’re just giving them little tastes of different things so that they know what’s out there.” (Cycle 1, July 2016 End Parent Group Interview)

The Course Variety code also included a small number of negative statements about the range of courses available ahead, suggesting that there were students with a less general love of learning and more specific interest in particular subjects:

“There is no good courses on anymore” (S161, Cycle 2 July 2017 End Questionnaire)

The link between positive current and past experiences of the LEAP classes and the anticipation of future courses, shows how students’ love of learning was not a static characteristic but a dynamic quality. In other words, it was not something which can be taken for granted but something which must be nurtured. The responses coded under Love of Learning from students at the end of the course shows this nurturing in action.

### 5.3.1.3 End of Course Love of Learning

Student love of learning was very evident in responses to questions about their experience of a course at the end of each term. The same codes as in the previous two sections captured the various forms this learning took, though the general Love of Learning code was less common than previously and the Specific Content was much more common:

“It was very fun. I learned a lot” (S148, Cycle 2 Spring 2017 End Questionnaire)

“It was a bit boring but you do get to learn useful information” (S22, Cycle 1 July 2016 End Questionnaire)



“Because it is an unique course that taught me about journalism that I would not usually get” (S15, Cycle 1 Spring 2017 End Questionnaire)

“I actually loved the science course because it’s something that I’m interested in and I feel like it’s just very interesting stuff that you don’t learn in school, it’s kind of like an add-on, it’ll help us in the future like.” (Cycle 2, Spring 2018 End Student Group Interview)

Parents offered another perspective on why students liked specific content:

“[Student] enjoyed coming, she enjoyed the layout of the paper, more than the words part because she’s just not a word person. She loved the layout and figuring out what way to lay it out to get the most out of the paper.” (Cycle 1, Spring 2017 End Parent Group Interview)

This movement of anticipated enjoyment of learning as a general process to positive retrospectives on both the learning of specific topics and on learning as a general process to further anticipation of general and specific learning in future courses gestures towards a self-reinforcing cycle in students’ love of learning. Students bring a love of learning to the LEAP programme and the LEAP programme provides them with concrete positive experiences of learning to further bolster their positive perception of learning as a process. The same codes were observed in students’ discussion of both the CAA courses which they undertook before starting the LEAP programme and the CTYI secondary school programmes which they undertook after taking the LEAP programme, suggesting that this is a stable aspect of students’ lives. Another indication of the stability of students’ love of learning was its prevalence in their perceptions of their school lives, an area which bears exploring in detail as another sub-theme within the Love of Learning theme.

### 5.3.2 Learning & School

Students’ positive sentiments towards learning were not reserved to their comments about the LEAP programme. Love of learning was also evident across student comments about their experiences of primary school, their anticipation of secondary school and their

experiences of secondary school. Sentiment towards learning in the school context was, however, more mixed, or perhaps more nuanced, than sentiment towards learning in the LEAP programme context. This section will attempt to trace the contours of this complex relation to school-based learning among the participating students through the exploration of two analytic codes identified in their responses to questions concerning their school experience- Positive Academic and Negative Academic. Within each of these analytic codes, there were sub-codes which gave further insight into the roots of these positive or negative sentiments.

### 5.3.2.1 Positive Academic

The Positive Academic code captured positive sentiments expressed towards the academic side of school, and featured heavily in participants' responses about their overall enjoyment of school and their favourite part of school. Many of the responses within this code mirrored the Love of Learning codes within the LEAP Programme sub-theme, focussing on both specific subjects and general learning. Interestingly, there was a chronological component to the relative popularity of these two codes. Responses regarding primary school experience tended more towards the general:

“I like all the stuff we learn. My teacher is really nice. I love when we do science”  
(S106, Cycle 2 Spring 2017 Initial Questionnaire)

“I like some subjects but not all and I have alot of good friends and school can also teach you something that you didn't know” (S242, Cycle 3 Spring 2018 Initial Questionnaire)

While the Positive Academic code was no less prevalent in responses to questions about secondary school than in responses to questions about primary school, it was generally more focussed, perhaps reflecting the greater regimentation of students' academic experiences in the secondary school setting. The allure of new subjects stood out as driving a large portion of the Positive Academic sentiment in students' anticipation of entering secondary school:

“I am looking forward to all of the new subjects I am going to take.” (S21, Cycle 1 July 2016 Initial Questionnaire)

“The languages like French, Spanish etc. and the subjects like art. Etc.” (S130, Cycle 2 Spring 2017 Initial Questionnaire)

“I am looking forward to making new friends, learning more about life and just experiencing the world around but I am a bit scared” (S165, Cycle 2 July 2017 Initial Questionnaire)

These subjects seem to have largely lived up to expectations, again featuring heavily in the Positive Academic sentiment expressed by students in secondary school:

“The best bit about Secondary is that you have more fun subjects to learn” (S13, Cycle 1 Spring 2017 Initial Questionnaire)

“[My favourite parts are] Sports, Geography, French, History and Business Study” (S137, Cycle 2 Autumn 2017 Initial Questionnaire)

Beyond the wider breadth of subjects available to students, the greater depth and pace offered in secondary school was also pointed to as a highlight for students in their new schools:

“Well I love secondary more than I liked primary because I like all the new subjects and then it’s more like this year. And then primary school was a bit... not boring but it was just a bit slow paced.” (Cycle 1, Spring 2017 End Student Group Interview)

“More challenging classes” (S101, Cycle 2 Autumn 2017 Initial Questionnaire)

“Learning more things and going through certain subjects (like art) more thoroughly” (S203, Cycle 2 Autumn 2018 End Questionnaire)

To delve deeper into what students’ Love of Learning meant in a school context, a question about what a student’s favourite subject was and why was added to the questionnaires in the second and third cycle. The most common responses were those coded as Like

Material, where students explained their love of the subject in terms of their engagement with the field:

“art is very interesting and creative! history is just fun and mysterious!” (S113, Cycle 2 Spring 2017 Initial Questionnaire)

“I like creative writing because it helps me think of ideas for my books” (S221, Cycle 3 Spring 2018 Initial Questionnaire)

Also common was the code of Mastery, where students discussed their love of a subject in terms of their ability in the area:

“I'm quite good at Maths and I enjoy it because I understand it.” (S122, Cycle 2 Spring 2017 Initial Questionnaire)

“Because I'm good at it and its hard it gets your brain working” (S144, Cycle 2 Spring 2017 Initial Questionnaire)

“Because I am good at them and I can get creative” (S155, Cycle 2 July 2017 Initial Questionnaire)

The only other responses beyond these two codes were a small number of responses mentioning a teacher as the appeal of a favourite subject and a pair of responses coded under Future, which related the subject to a degree or career in later life. This suggests that students mostly enjoy their favourite subjects based on both what they regard as the intrinsic interestingness of the subject itself and their own ability in the subject. Overall, responses within the Positive Academic code suggests that love of learning is a significant factor in students' day to day school lives, and that it exists as both a general love of learning and a love of learning for specific subjects in the school context, as in the LEAP context.

### 5.3.2.2 Negative Academic

While fewer responses were coded as Negative Academic than Positive Academic, more respondents expressed negative sentiments towards learning in school than towards learning on the LEAP programme. Some of these comments were straightforward and general in their antipathy towards the academic side of school, none more so than a student in the second cycle:

“Its boring” (S153, Cycle 2 July 2017 Initial Questionnaire)

Others were focussed on specific subjects, and inverted the factors underpinning Positive Academic responses by pointing to a dislike of the material and a perceived lack of competence in the subject.

“Irish is my least favourite part of school” (S157, Cycle 2 Autumn 2017 Initial Questionnaire)

“[My least favourite part of school is] the subjects I'm not good at” (S116, Cycle 2 Spring 2017 Initial Questionnaire)

Due to the breadth of learning involved in school experiences, there were a large number of mixed responses, with students liking certain topics but expressly disliking others or enjoying some lessons but not all of them:

“I like the maths and english. I don't really like irish or geography. I like history but am not good at it.” (S181, Cycle 2 July 2017 Initial Questionnaire)

“I like learning about history. I like the 1916 Rising and the Famine. I do not like maths. I least like learning about dividing fractions” (S149, Cycle 2 Spring 2017 Initial Questionnaire)

“I like the lessons but I think that some of them are very bland and boring” (S25, Cycle 1 July 2016 Initial Questionnaires)

While the Positive Academic code and many responses within the Negative Academic code painted a similar if slightly more ambivalent picture of students' love of learning to the LEAP Programme codes, there were two distinct sub-codes within the Negative Academic code which highlighted a different perspective. These were coded as Negative Homework and Negative Pressure. Negative Homework, as the name suggests, was the code applied to responses which pointed to homework as a negative aspect or the worst part of the student's school experience, and it was a common feature of students' sentiments towards school throughout their time on the programme. While there were almost as many complaints about homework in responses from students in primary school as in responses from students anticipating secondary school and students in secondary school, there was a definite sense that homework would get worse in secondary school.

"I don't like the homework but I don't mind the work" (S10, Cycle 1 July 2017 Initial Questionnaire) [Primary School]

"I'm worried about homework" (S125, Cycle 2 Spring 2017 Initial Questionnaire) [Anticipating Secondary School]

"[My least favourite part is] Longer days + more homework" (S118, Cycle 2 Autumn 2018 Initial Questionnaire) [Secondary School]

That students dislike homework is hardly a novel finding, but it seems significant that this antipathy is coming from students with otherwise positive sentiments towards school, specific academic subjects and learning in general, as summed up in one response from the a 1st year student in the Autumn term of the first cycle:

"I like the teachers, subjects and classes but hate homework" (S15, Cycle 1 Autumn 2016 Questionnaire)

Negative Pressure, meanwhile, was the code applied to responses which identified the pressure of school as a negative aspect of school or a worry for the students. Negative Pressure was applied to only five responses from primary school students, and two of these were mixed rather than wholly negative:

“School can be fun but stressful sometimes. We mostly don't get a lot of homework” (S153, Cycle 2 Spring 2017 Initial Questionnaire)

“Sometimes it gets too hard” (S04, Cycle 1 July 2016 Initial Questionnaire)

One student, however, was already voicing a systemic critique of the education system in the July term of the 3rd cycle, immediately after finishing 6th class:

“I hate the fact that we're forced to go there, that if you don't do well in school your entire life goes down the drain, that people put WAY too much stock in tests, etc.” (S225, Cycle 3 July 2018 Initial Questionnaire)

As students moved on to anticipating their time in secondary school, the underlying sentiment above was expressed far more often, though it was more often phrased in terms of anxiety than righteous anger. Indeed, Negative Pressure was the most commonly occurring negative code across students' anticipation of secondary school. Responses clustered around anxiety over not doing well in schoolwork in general, increased volume and intensity of tests and exams and the looming spectre of the Junior Certificate and Leaving Certificate exams and beyond, although students on the programme were at least two and five years respectively away from sitting these exams:

“[I'm worried about] not being able to keep up with the work” (S105, Cycle 2 July 2017 Initial)

“I am worried about not passing on to college after 6 years of work” (S207, Cycle 3 Spring 2018 Initial Questionnaire)

“I am worried about leaving cert and the other cert and also bullies” (S201, Cycle 3 Spring 2018 Initial Questionnaire)

Interestingly, Negative Pressure was much less common in responses from secondary school students, perhaps because the question was reframed from “What are you most worried about in secondary school?” to “What's the worst bit about secondary school?” Many responses still emphasised the increase in volume or intensity of tests, but they generally did not link this increase to future high stakes examinations:

“All of the tests” (S01, Cycle 1 Spring 2017 Initial Questionnaire)

“Having to learn so much in one day, and also having exams” (S113, Cycle 2 Spring 2018 Initial Questionnaire)

3: I like secondary school, there’s different things that I like. So some subjects I don’t like, some subjects I do like. I don’t like the tests.

E: You don’t like the tests. Are you doing lots of tests?

3: Yep

E: Much more than primary school?

3: Yep” (Cycle 2, Spring 2018 End Student Group Interview)

Only one secondary school response gestured towards the sense that the pressure was not just day-to-day tests but grounded in a longer term pressure to do well:

“The amount of stress I feel to "do this right" or "remember that, it'll be important later"” (S237, Cycle 3 Autumn 2018 Initial Questionnaire)”

Overall, Negative Pressure presents a multilayered picture. Anxiety about exams and “keeping up” appears to dominate students’ worries about secondary school as a concept, a concept in which the Junior Certificate and Leaving Certificate figure strongly. The day to day realities of secondary school, however, inspire less anxiety and more weariness, with the quantity of tests featuring more heavily than their significance. Even then, students were generally more preoccupied with issues like homework and specific subjects than tests and the pressure they placed on students- both Negative Homework and Negative Academic were far more common than Negative Pressure in responses from secondary school students.

Student perceptions of school give us an insight into the extent, and especially into the limits, of their love of learning. Overall, most students enjoyed learning in the school context, and many even enjoyed school in general due (in varying degrees) to the learning they experience there. Against this, there were some students who didn’t enjoy particular subjects or certain aspects of school learning, even while they enjoyed others. Homework, however, was considered almost entirely in a negative light- the one response coded under



Positive Homework was a reference to preferring secondary school to primary school because there was “Less homework” (2G). Homework clearly was not included by students in their conception of learning, and none felt the need to explain why it was bad or qualify their dislike. The absence of homework in the LEAP programme, then, surely contributed to students’ more straightforwardly positive perceptions of learning in the LEAP context: no surprise certainly but something which will be discussed further in the discussion chapter in relation to the strengths and weaknesses of the LEAP programme as a model for other programmes. Similarly, the pressure felt in school as a result of frequent tests and an overarching worry about “succeeding” was largely absent from the LEAP programme, except perhaps in relation to the Talent Search assessment (see section 5.4.3.2). “Pressure”, or rather the absence thereof, will also be discussed in the discussion as a central organisational feature of the LEAP programme.

The presence of homework and tests was not the only difference between school and the LEAP programme, only the most pronounced in relation to students’ sentiments towards learning. In response to a question explicitly about the differences between the LEAP programme and school, many students’ answers centred around the perceived differences in learning between the two contexts as the biggest distinction. Comments from the sub-theme LEAP Compared to School will now be used to further expand on the Love of Learning theme.

### 5.3.3 Learning Differences Between LEAP & School

The most common code applied to student comparisons between LEAP and school was Prefer Style of Learning, which was applied to responses which pointed to aspects of learning on the LEAP programme which students preferred to their school experiences. Within this code, three specific positive points were laid out- students liked the depth of the courses, the choice of subject matter and the more relaxed and open style of of the classroom:

“It gives you more detail in the things you learn & more facts” (S115, Cycle 2 Spring 2018 End Questionnaire)

“You can pick what you want to learn and it's far more interesting” (S236, Cycle 3 Spring 2019 End Questionnaire)

“The leap program is alot more laid back but I still learn alot” (S189, Cycle 2 Spring 2018 End Questionnaire)

“Of course, it's more mature and college-like which is great and I quite look forward to going” (S154, Cycle 2 Spring 2018 End Questionnaire)

Parents gave a wider view of the different environments, drawing attention to how the classroom atmosphere allowed students to drive their own learning:

“2: I think with here as well they’re allowed to use their imagination and they’re allowed to have input and they’re listened to and that’s a huge thing I know for [Student] because I know in school sometimes she’ll have ideas or she’ll say something and she’s kind of dismissed about it because she’s going off track or whatever.

3: It’s not on the curriculum.” (Cycle 1, Spring 2017 End Parent Group Interview)

Almost as prominent a code was More Enjoyable, which captured statements about the LEAP programme being more enjoyable than school. Unfortunately, most of these responses said no more than that:

“It is more fun” (S02, Cycle 1 Spring 2017 End Questionnaire)

“Leap is better” (S102, Cycle 2 Spring 2018 End Questionnaire)

“It is way more fun” (S243, Cycle 3 Spring 2019 End Questionnaire)

Three responses, though, did elaborate further, and these suggested that the casual but focussed atmosphere of the classes contributed to the greater enjoyment:

“No uniform, no books, more fun, a lot shorter” (S148, Cycle 2 Spring 2018 End Questionnaire)

“it is more fun and less stressful” (S121, Cycle 2 Spring 2018 End Questionnaire)

“It is different because it is a bit more fun and class is more controlled” (S15, Cycle 1 Spring 2017 End Questionnaire)

Another code, Prefer Subject Matter, related to the content rather than the style of learning on the LEAP programme. Several students felt that the subject matter of LEAP courses was more interesting or useful than what they were learning in school, linking their love of learning to practical uses of this learning:

“You wouldn't learn about newspaper, forensics etc in school” (S110, Cycle 2 Spring 2018 End Questionnaire)

“I learn more things I enjoy/ will use in LEAP” (S225, Cycle 3 Spring 2019 End Questionnaire)

Unsurprisingly, negative feelings towards homework surfaced in students' comparison of school and the LEAP programme, though not to the extent one might have expected from the level of anti-homework sentiment in student responses to questions about school alone. Only two responses mentioned homework at all, the same number as mentioned uniforms:

“In comparison the LEAP programme is well better than school because we don't get homework” (S111, Cycle 2 Spring 2018 End Questionnaire)

While these responses indicated that the absence of homework was a point in the LEAP programme's favour, the fact that there were only two of them raises an interesting question about how students really feel towards homework. Was homework omitted from students' comparison of school and LEAP because they actually do not feel as strongly as the Negative Homework code suggests, or was it the case that it simply didn't dawn on them that homework could be part of the LEAP programme due to their refusal to recognise homework as part of the learning process? Based on my experiences observing the classes and chatting to students informally I would lean towards the latter, and I think that the absence of homework contributed to the prevalence of the Prefer Style of Learning and More Enjoyable codes, even if it was not explicitly mentioned by students.

Some students felt that there was no real difference between the LEAP programme and school, suggesting that these students saw learning as fundamentally the same across the two contexts:

“You still learn stuff” (S153, Cycle 2 Spring 2018 End Questionnaire)

“Because it's classes + education” (S208, Cycle 3 Spring 2019 End Questionnaire)

Others expressed the opinion that school was more difficult than the LEAP programme, though they did not elaborate on what they meant by more difficult- there is a world of difference between school being more academically challenging and more personally demanding. In both cases, though, school being harder was perceived as a positive for the LEAP programme:

“It's a lot more relaxed than school and I enjoy it more because they don't expect as much of you” (S203, Cycle 3 Spring 2019 End Questionnaire)

“School is harder” (S230, Cycle 3 Spring 2019 End Questionnaire)

In general, comparisons between the LEAP programme and school tended to be framed in similar terms to student appraisals of both the LEAP programme and school, and placed a similar emphasis on positive sentiments towards the learning undertaken in the LEAP programme. Love of Learning was the standout feature of student experiences of each of these three contexts, though it presented in each in slightly different ways. The final area in this study where students demonstrated their Love of Learning was in their discussion of university and their motivations for wanting to attend.

### 5.3.4 Learning & University

Much like Love of Learning, the aspiration to go to university was something students brought to the LEAP programme rather than something arising from their participation in it. Aspiration has already been discussed in the context of the impact of the LEAP programme (see section 5.2.3.2); in this section we will look only at the interaction between students' Love of Learning and their desire to attend university. The five codes which capture this interaction were Enjoyment & Personal Development, Specific Career

or Subject, Education for Itself, Better Life and Career or Income. These codes, it will be argued, also provide a perspective on students' love of learning which goes beyond their individual experiences and perceptions and illuminates the social construction of education as an ideal in students' lives.

#### 5.3.4.1 Enjoyment & Personal Development and Specific Career or Subject

Responses coded under Enjoyment & Personal Development in many ways extended students' Love of Learning from the present into their anticipated university experience. Students framed their desire to go to university in terms of the joy attending would bring them and their positive feelings towards a further opportunity to learn:

“Yes it's because I want to learn more and because I think that the most fun time in your life will be college.” (S120, Cycle 2 Spring 2017 Initial Questionnaire)

“because I think its good and you learn loads from it” (S150, Cycle 2 Spring 2017 Initial Questionnaire)

“Because you learn so many new things and meet new people” (S154, Cycle 2 Spring 2018 End Questionnaire)

“To learn!! x 100” (S118, Cycle 2 Spring 2017 End Questionnaire)

Similarly, Specific Career or Subject contained many responses which extended students' love of specific subjects or types of learning on to third-level.

“I would love to be a geography and French teacher. I have to go to college for that” (S29, Cycle 1 Spring 2017 End Questionnaire)

“I want to learn more languages and learn about mechanics and chemistry.” (S101, Cycle 2 Spring 2017 Initial Questionnaire)

“Because I'll learn even more and I'll be learning how to be a scientist” (S166, Cycle 2 July 2017 Initial Questionnaire)

The naiveté which characterises many of the responses within these two codes is a reminder that these students are still only 11 to 14 years of age and so it is to be expected that their aspiration far outstrips their concrete knowledge of what university is and what one can do there. It is only natural, therefore, that many of these students imagine university as a more or less straightforward extension of their current educational experiences. In relation to the above two codes, therefore, responses from the University sub-theme simply add more weight to the Love of Learning as observed across the rest of this chapter. If we take the same perspective towards the other codes to be discussed in this chapter and approach them from the understanding that students' perceptions of university are constructed without any personal experience of university, these perceptions provide a productive window into the social component of students' Love of Learning.

#### 5.3.4.2 Education for Itself and Better Life

The Education for Itself code was the second most common, and comprised responses which affirmed the intrinsic benefits of education in the context of third-level studies. In the same vein as many responses in the previous section, there were several responses which presented a college education as a continuation of students' current experiences:

“To go on further in my education and to see how far I can get” (S04, Cycle 1 July 2016 Initial Questionnaire)

“Because I want to go further with my education. I want to use my brain” (S139, Cycle 2 Spring 2017 End Questionnaire)

There were also, however, responses which conflated university with “an education”, as if it stood alone, separate and superior to primary and secondary education:

“Because I want to get a good education” (S22, Cycle 1 July 2016 Initial Questionnaire)

“I would love to go to University because I want an education” (S122, Cycle 2 Spring 2017 End Questionnaire)

This subtle but significant reframing of how students conceptualised an education should, I would argue, be understood as resulting from their internalisation of the social construction of “an education”- a construction which associates education with various forms of success in the modern world. The association of “education” as a general idea or a university education in particular with vaguely positive life outcomes was prominent enough in students’ comments on wishing to attend university to demand its own code, Better Life:

“I want to go far in life” (S25, Cycle 1 Spring 2017 End Questionnaire)

“Yes because I want a good future” (S121, Cycle 2 Spring 2017 End Questionnaire)

“because you have a better chance of fulfilling your dreams if you go to university” (S182, Cycle 2 July 2017 Initial Questionnaire)

That this conception of education is largely an accurate- if massively oversimplified- reflection of the benefits of a third-level degree (as discussed, indeed, in section 2.3.3 of this thesis) does not make it any less an example of a social construction with which the student is engaged. Social constructions, after all, are not obscurers of or alternatives to reality but the only way we can access reality. Similarly, a sincere but unsophisticated belief in the value of an education may be an instantiation of the student’s general positive perception of learning and its lifelong benefits. The final code within the University sub-theme, Career or Income, is made up of students who conceived the value of an education in a different way.

#### 5.3.4.3 Career or Income

Career or Income was the code applied to responses which linked attending university with getting a “good job” or earning money rather than a specific career:

“Because it will help me get a better job in life ahead” (S28, Cycle 1 July 2016 Initial Questionnaire)

“Because if I do I could get a really good job and do something I enjoy” (S127, Cycle 2 Spring 2017 Initial Questionnaire)

“Because I would get a good education and good job and good money! €€€” (S153, Cycle 2 Spring 2017 End Questionnaire)

Career or Income coded responses were the most common responses within the University sub-theme, suggesting that it captures something which has been thoroughly internalised by students even by the end of primary school. It would be easy to interpret the responses captured by this code cynically, even to view them as undermining students’ previously expressed Love of Learning. I think, though, that this would be to miss the way students experience and conceptualise education simultaneously rather than independently. Their third-level aspirations and the potential material benefits resulting from these aspirations (in the minds of some students at least) are linked to, indeed partially built on their present feelings towards learning and education, even as these present feelings are informed by the promise of future rewards. The LEAP programme enters and strengthens this feedback loop, further encouraging students in their love of learning by broadening and deepening their learning experiences.

Students’ love of learning was a powerful and durable force, expressed frequently and powerfully across their time on the LEAP programme. The findings discussed within the Love of Learning theme suggest that it was vital to students’ engagement with the programme and that it was sustained and developed by their participation in the courses. The encouragement of this passion for education and learning is, I believe, as important a feature of the LEAP programme as the directly transferable academic benefits described in section 5.2.1. Love of learning was a strong driver of students’ positive perceptions of school, positive perceptions which have the potential to influence students’ long term engagement with school and future education, as will be discussed in section 6.6. Together, the Impact of Programme and Love of Learning themes paint a picture of what students brought to the LEAP programme and what they got out of it. Some aspects of the programme were more effective than others in enabling and encouraging students to realise their potential, and so the final theme which will be explored will focus on how the structure and specific components of the LEAP programme influenced students’ experience of it.



## 5.4 Programme Design

The LEAP programme is a product of its immediate context, shaped by the history, philosophy and material realities of CTYI, DCU and the surrounding area. The transferability of the programme design aspect of this research, therefore, lies not in direct transplantation of the structure onto other contexts but in careful and reflective translation of the structure or pieces thereof to other contexts, as discussed in Chapter 3. The goal of this section is to answer two of the research questions fundamental to this study:

- ❖ Are there elements of the LEAP programme which participants find particularly beneficial? Are there elements they find unnecessary or counter-productive?
- ❖ How do participants perceive their experience of the transition into the CTYI secondary school programme and their experience of the Talent Search assessment?

It will do so by considering the most important aspects of the programme in order to explore how they have functioned over the course of the LEAP programme and, where relevant, to note how specific programme features were tailored to best fit into the programme's environment. This section will look at the structure of the programme across four sub-themes: Integral Components, Long-Term Engagement, Transition and Action Research. To a far greater extent than the previous two themes, Programme Design raises questions which cannot be answered within the scope of this study, questions which have pushed me to interrogate the field of high ability studies and several of its central assumptions. Even as it problematises these assumptions, the theme also contains findings which reinforce ideas of best practice widespread in the field. Captured in the sub-theme Integral Components, these findings are confirmatory rather than novel and so they will be covered in brief before moving on to the other sub-themes.

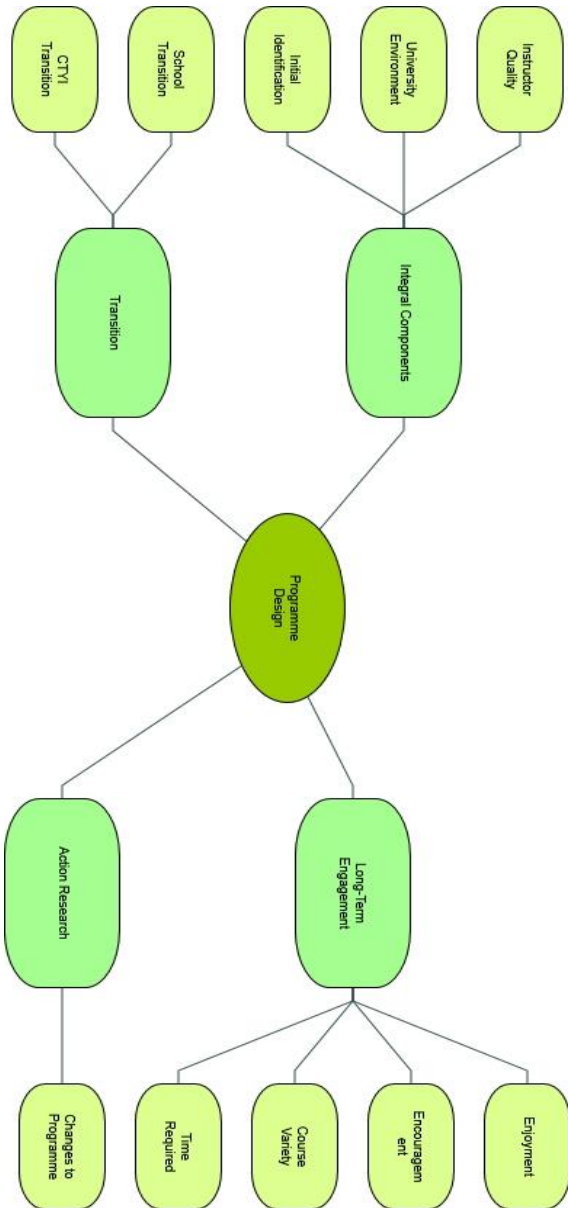


Figure 5.4 Programme Design Theme

## 5.4.1 Integral Components

The most prominently remarked upon aspects of programme design were the challenging and novel academic content students engaged with on the programme and the welcoming social atmosphere within the classes. These are foundational aspects of any programme for high ability students, and the findings from this study (as discussed in relation to the first two themes covered in this chapter) show that they are equally vital in programmes for high ability students from disadvantaged backgrounds. There are three other aspects of the programme design which bear slightly deeper investigation. The first, Instructor Quality, relates to common practice across out of school enrichment programmes that was somewhat modified in this programme, while the second, University Environment, is a less settled question in the field. The third, Initial Identification, is perhaps the most controversial aspect of high ability education, as discussed in section 2.2, and so it is particularly worth exploring the identification experiences of students, their parents and teachers in this study.

### 5.4.1.1 Instructor Quality

Many students pointed to their instructor and/or teaching assistant as vital to their enjoyment of the programme:

“4: I liked everything about it, especially the teacher because she made us feel comfortable and got all our questions answered, she just answered all of them. The people were nice there.” (Cycle 1, July 2016 End Student Group Interview)

“5: I liked the teacher because she was just better than any other teacher that I’ve ever had. And she’s not a grump.” (Cycle 1, July 2016 End Student Group Interview)

“The teachers make sure they include the students” (S04, Cycle 1 Spring 2017 End Questionnaire)

Again, ensuring that instructors are experts in their fields who understand that their role is to get students involved as well as to deliver the course content is a basic ingredient of programmes for high ability students. In this case, the instructors who were hired to teach

the LEAP classes were chosen not just because of their competence, temperament and experience but also because they understood what the LEAP programme was trying to accomplish and why it was needed. Where possible, staff were hired from DCU and specifically through the DCU Access system, giving students a role model in the classroom and helping further strengthen the links between CTYI, the university and the community. In nominating the LEAP programme for the DCU President's Award for Engagement, one instructor summed up the commitment he brought to the position and the personal reward he took from it:

“As a graduate and the holder of a PhD from DCU, it is a privilege to be able to take part in the LEAP programme as an instructor. Seeing the level of interest that students show for subjects and ideas they may not have encountered before is just fantastic. Every student is given the opportunity to share their own opinions and seeing how they take to it with gusto is simply inspiring. The LEAP programme allows students, who might otherwise go hungry, to satisfy their desire for different ideas and learning experiences.”

*Dr. Declan McGlade, Environmental Science Instructor, Spring 2019.*

The value of creating a team of individual staff members who are all committed to the same principles and programme aims is, I believe, understated by looking only at responses which explicitly mention instructors and other staff. The positive perceptions students had of the academic and social sides of the programme must also be considered a reflection on the people who delivered the course and guided the classroom atmosphere. My own researcher's diary records myriad interactions with staff centred around their wish to improve their practice, whether in terms of tailoring academic content, brainstorming practical activities or working with individual students. I am not going to attempt to quantify the impact of these instructors, but I do not need a p-value to know that it was significant. The qualitative data testifies to the positive impact they had on students, even if it is impossible to disentangle this impact from the impact of separate but intertwined factors like the interest students had in the subject they were studying or how well they got on with other students. Another linked contributor to student experiences of the programme was its location in DCU, the impact of which we will now consider.

### 5.4.1.2 University Environment

Third-level institutions are the setting for almost all out-of-school programmes for high ability students, and the findings to be discussed in this section echo the literature in emphasising the value of bringing students onto a university campus (see for example Olszewski-Kubilius et al., 2017; VanTassel-Baska, 2007; Brody, 2009). Several student responses seem to conflate DCU and the LEAP programme, with their positive feelings towards the programme extending towards the university in general:

“Because I find DCU great!” (S121, Cycle 2 Spring 2017 End Questionnaire)

“Because I love DCU + all the classes” (S208, Cycle 3 Spring 2019 End Questionnaire)

Other students stated that their participation in the programme had instilled in them the desire to attend DCU in future:

“I like it here and I'm familiar with it” (S101, Cycle 2 Spring 2017 End Questionnaire)

“I would like to go to university because I just like this place alot” (S210, Cycle 3 Spring 2018 Initial Questionnaire)

“4: I want to go here because it's a good college and it's only down the road” (Cycle 1, Spring 2017 End Student Group Interview)

Parents and teachers also noted the benefits of the university setting, seeing it as a vital part of the programme's overall appeal:

“Yes, absolutely yes. She enjoys all aspects of it. Educational, communication, having friends, being in this environment, being in a real university, you know, it's great.” (Cycle 1, Spring 2017 End Parent Group Interview)

“And as I said, he loves coming here, he loves the little secret place. I mean it's very unusual, I think DCU is the only college in the country that does it. They give

children an opportunity to participate in what is a third level education so one they get used to life in university, they get used to lecturing. They're not treated differently to anybody else.” (Cycle 1, Spring 2017 End Parent Group Interview)

“They love the chance to go to DCU, it opens their eyes to how far they could go in the future” (T(P)201, Cycle 2 Primary Teacher Questionnaire)

While the LEAP classes themselves could quite easily be conducted in school classrooms rather than university classrooms, the programme would certainly lose something if removed from its third-level setting. The sense of a new atmosphere, distinct from school, was important in its own right, but the fact that this atmosphere was a university campus was crucial. Giving students a chance to grow comfortable with DCU and feel that they are respected and valued by CTYI and the university is invaluable, especially for the many students with no family history of college attendance:

“The opportunity means a lot to them. They have huge potential but no family experience of education to guide them” (T(P)305, Cycle 3 Primary Teacher Questionnaire)

As the above quote shows, students' teachers were aware of both their potential and the particular challenges they faced in converting this potential into ultimate achievement, and so it was teachers who initially nominated students for the programme. The next section will look at findings from the study which give greater insight into this identification process and its impact upon participating students.

#### 5.4.1.3 Initial Identification

Almost all programmes for high ability students begin with an identification stage designed to find students suitable for the programme. In the case of the LEAP programme, this stage consisted solely of teacher nomination rather than a formal assessment or other method. Each school was invited to nominate two students to take part (with the possibility of nominating more if there was space in the class once the original application deadline had passed) based on their demonstrated ability in class and their interest in an out-of-school academic enrichment course. The teachers surveyed mentioned both of these factors when

explaining how they selected students, as well as pointing to the consideration given to students' backgrounds:

“Highest STEN scores in class & both excited by idea of class” (T(P)301, Cycle 3 Primary Teacher Questionnaire)

“They have incredible potential and both fit the "Access cohort" described in the guidelines- they would be the first in their family to go on to third level” (T(P)202, Cycle 2 Primary Teacher Questionnaire)

“1. Because he is an excellent student. 2. Because he could be an excellent student with a push in the right direction” (T(P)205, Cycle 2 Primary Teacher Questionnaire)

While the use of teacher nomination made the identification stage a purely subjective process, I believe that this was justified by the fact that it did not entail students having to take part in a special assessment to qualify for the programme. Given the prevalence of students who identified tests as their greatest worry for or least favourite part of secondary school, I would argue that the positives of avoiding the stress and anxiety of another assessment outweighed the negatives of the potential loss of accuracy in nominating the most suitable students. The Talent Search code provides an interesting perspective on this tension in the context of the CTYI secondary school assessment, and will be discussed in detail in section 5.4.3.2.

The teacher nomination was pointed to as a confidence boost by some students:

“I like school more and I know someone is noticing my level of knowledge in school” (S154, Cycle 2 Spring 2018 Initial Questionnaire)

“My teacher, he said that I'm capable of doing it” (S242, Cycle 3 Spring 2018 Initial Questionnaire)

Parents also remarked on the teacher nomination as an encouragement for students, framing it as a recognition of students' ability and a reward for their hard work in school

“1: I think it’s quite an achievement for children to be here, it’s not just chosen randomly, they have to earn their place here and I think that they know that and because of that it drives them forward.” (Cycle 1, Spring 2017 End Parent Group Interview)

Overall, I believe that the initial identification process was effective, if far from perfect, and that, within the context of this programme and its goals, teacher nomination was the most appropriate form of identification available. The question of identification will be returned to as it relates to the Talent Search in section 5.4.3.2, and again in the next chapter within a wider discussion of education for high ability students from disadvantaged backgrounds. With the possible exception of Initial Identification, the programme design factors grouped under Integral Components, though noteworthy as vital parts of the LEAP programme, were not themselves particularly surprising or novel. The rest of the exploration of this theme will concentrate on findings from this study which in various ways diverge from standard practice in the field, beginning with an examination of the LEAP programme as a long term engagement for students.

#### 5.4.2 Long Term Engagement

The LEAP programme involved Saturday and summer classes across multiple terms over the course of over a year, and thus required a significant commitment of time and energy from participants. A significant number of students were not willing to make this commitment, and the percentage of students who completed the final term of the programme varied from 69% in the first cycle to 32% in the third cycle. Table 5.4 shows the number of students who participated in each term across the three cycles while Appendix B shows each student’s participation across the three/four terms.



**Table 5.4- LEAP Attendance by Term**

Cycle	Spring 6th Class	July	Autumn	Spring 1st Year
Cycle 1		26	11	18
Cycle 2	53	34	47	31
Cycle 3	38	9	15	12

As well as the decline in numbers of participating students over the course of the programme, the fluctuating numbers illustrate the partial participation of many students. These students missed one (or sometimes two) terms but went on to participate in subsequent terms. Long-term engagement was less a binary, therefore, than a spectrum, where students ranged from those who were deeply committed to the programme and attended every second of it to those who were ultimately uninterested and did not complete a single term. Even within this spectrum, there was a noticeably greater decline in participation in the third cycle than in the previous two, potential causes of which will be considered throughout this section. The findings related to engagement and disengagement will be examined to explore which aspects of the programme and students' wider lives encouraged continued participation and which contributed to students disengaging from the programme. These findings will be considered under four headings- Enjoyment, Encouragement, Course Variety and Timing of Classes, each of which contains both the former and the latter.

#### 5.4.2.1 Enjoyment

Student enjoyment of courses did not have the straightforward relationship with future course attendance one might expect. Although most students enjoyed each class, there were students each term who did not enjoy the class, with most of these responses captured under the code Boring or Confusing:

“It was pretty boring. And I could've learned it in school instead of on a Saturday”  
(S214, Cycle 3 Autumn 2018 End Questionnaire)

“We were doing stuff we already learned but he was making it more confusing”  
(S27, Cycle 1 July 2016 End Questionnaire)

“I was bored most of the time. We done computers 4 days running” (S161, Cycle 2  
July 2017 End Questionnaire)

Tables 5.5, 5.6 and 5.7 show the number of students who returned for another class and the number who did not in relation to their stated enjoyment of their first course in the questionnaire at the end of the first term. Each table covers the first term of a different cycle. There is no clear pattern across the three cycles, with half of the students who enjoyed the (Cycle 3) Spring 2018 term “Very much” returning for another term and half of them not returning while the one student who did not enjoy the (Cycle 2) Spring 2017 term returned for classes in Autumn 2017 and Spring 2018. As such, while student enjoyment of classes likely had some level of positive impact on the likelihood of continued participation, it was clearly not a deciding factor for many students.

**Table 5.5 Cycle 1 July Term: Enjoyment of class and subsequent participation**

Enjoyment of Course	Continued attending	Did not continue attending
Very much	13	4
It was ok	4	3

**Table 5.6 Cycle 2 Spring 6th Class Term: Enjoyment of class and subsequent participation**

Did you enjoy this course?	Continued attending	Did not continue attending
Very much	29	6
It was ok	5	2
Not that much	1	-

**Table 5.7 Cycle 3 Spring 6th Class Term: Enjoyment of class and subsequent participation**

Did you enjoy this course?	Continued attending	Did not continue attending
Very much	10	10
It was ok	5	2

#### 5.4.2.2 Encouragement

Beyond enjoyment and other aspects of students' self-motivation to attend the programme, many students reported being encouraged to attend the programme by their parents, teachers and friends. As with student enjoyment of the course, reported encouragement to continue attending did not have any clear relationship with continued participation. Students who were encouraged to attend by parents, teachers or friends and students who reported no encouragement all continued attending or ceased attending in similar numbers. This is not to say that such encouragement is unimportant or has no impact on students, only that it is clearly only one part of the broader picture of engagement.

Although many students reported being encouraged to attend by others, only two students stated that they were "forced to attend". Interestingly, while one such student, S231, did not enjoy the second and third terms, they did report enjoying the fourth and final course they took part in, at the end of which they gave a positive evaluation of the LEAP programme as a whole. I certainly would not interpret this shift as implying that students

should be forced to attend the classes, but it does show how enjoyment of each term varied from class to class for each student. The responses grouped under Course Variety illuminate this further.

### 5.4.2.3 Course Variety

As discussed in Section 5.2.1, while some students were driven by a general love of learning, others were passionate only about specific subjects and topics. I believe that the narrow range of choices available each term played a significant role in student disengagement from the programme (especially in the third cycle), though the findings which support this view generally do so obliquely rather than explicitly.

Perhaps the most explicit reference to the impact of course variety on continued participation was a student who reported that they were not looking forward to the rest of the LEAP programme as:

“There is no good courses on anymore” (S161, Cycle 2 July 2017 End Questionnaire).

This student did not attend any further courses, suggesting that, among other factors, the classes offered in the Autumn and Spring term did not appeal to them. Another student showed this even more clearly. They took part in just the Spring 2018 and the Spring 2019 terms (and reported strongly enjoying both of them), and at the start of the Spring 2019 term stated they were looking forward to the class specifically because of its topic:

“I like learning about the environment but the rest of the classes were boring”  
(S230, Cycle 3 Spring 2019 Initial Questionnaire)

While these students were the only ones to say outright that they were put off by the narrow range of courses available, I believe that it was a factor in many students’ disengagement, especially those who had enjoyed their previous course.

Another code which gives weight to the importance of the range of available courses to continued student engagement was Course Variety as it manifested in student anticipation

of future courses, and especially in their anticipation of the secondary school programmes with their wide range of available classes:

“I am looking forward to it because there are courses that I really wanted such as computer gaming” (S16, Cycle 1 Spring 2017 End Questionnaire)

“Because we had a lot of options for courses and they all looked really interesting” (S111, Cycle 2 Spring 2018 End Questionnaire)

While the data make clear that the range of available courses impacted students’ continuing engagement, no real solution to this issue was found within this study, a problem which will be discussed in greater detail in relation to the limits of an action research approach in section 5.4.4.1.

#### 5.4.2.4 Time Required

The final group of codes within the data which shed light on long term engagement and disengagement related to the fact that the LEAP programme was an out of school programme. While the LEAP programme was not school, it was still an academic activity which took place during students’ limited free time. Many students noted that their out of school activities changed once they entered secondary school because their free time became even more limited:

“Yes, because I barely have time to do anything because I have lots of homework” (S121, Cycle 2 Autumn 2017 Initial Questionnaire)

“Yeah, because i don't really get to go out anymore because of homework” (S175, Cycle 2 Autumn 2017 Initial Questionnaire)

“No everything is the same except I have less spare time cos I've loads of homework” (S111, Cycle 2 Autumn 2017 Initial Questionnaire)

It is no surprise, then, that a number of students expressed frustration with having to “give up” their Saturday afternoons to take part:

“It’s fun but the fact that I have to go on a Saturday is annoying” (S153, Cycle 2 Spring 2018 Initial Questionnaire)

“It’s another day at school” (S27, Cycle 1 Spring 2017 Initial Questionnaire)

“It was pretty boring. And I could’ve learned it in school instead of on a Saturday” (S214, Cycle 3 Autumn 2018 End Questionnaire)

This frustration may have caused or been caused by students growing jaded with courses after taking so many. As one student stated after their third term on the LEAP programme, having also taken part in the CAA programme beforehand:

“I feel I’ve done it loads of times” (S125, Cycle 2 Autumn 2017 End Questionnaire)

Yet, while some students felt they had reached saturation point, others appreciated the chance to do so many courses:

“I love all the Leap programmes THIS IS MY Third One!” (S182, Cycle 2 Spring 2018 Initial Questionnaire)

“all the Dcu courses I’ve gone to were fun so hopefully that one is too” (S116, Cycle 2 Spring 2018 End Questionnaire)

Parents also noted the value of being able to do numerous courses across the span of the programme:

“It’s quite expensive if you do it privately, it’s quite a strain. It’s one, a weight off my mind and it’s nice to know that somebody has your back and you can involve yourself in keeping this going. He really looked forward to going two or three or four times a year, especially in the summer. And every time you come there’s new courses on the agenda so it’s never repeating itself all the time. It’s great for them to have a choice of what they truly like rather than be forced on them. And as I said, he loves coming here, he loves the little secret place. I mean it’s very unusual, I think DCU is the only college in the country that does it.” (Cycle 1, Spring 2017 End Parent Group Interview)

Similarly, some students saw the classes not as impinging on their limited free time but as giving them something to do during otherwise empty time:

“I find it interesting and something to do on a Saturday” (S155, Cycle 2 Spring 2018 End Questionnaire)

“I don't get to do much during summer so the summer LEAP programme will be a fun thing to do” (S25, Cycle 1 Spring 2017 Initial Questionnaire)

Others spoke of a very full schedule, into which they struggled but managed to fit the LEAP programme:

“And how about if there was a class this time next year but ye also had hurling training and dancing or something like that. Would ye put this before that or would ye rather do that?”

1: Well I'm supposed to be in a ballet class right now so I'd choose this.

E: Ok, [Student]?

2: I'd probably choose this over it.

3: I'd probably put learning first.

4: Well I'm already putting learning first.

5: I'd probably put this first.

6: I dunno I'm the club captain and I do loads of team things so it'd depend.

7: I'd probably put this first.

8: I'm already missing matches so I'd keep putting this first.” (Cycle 2 Spring 2017 End Student Group Interview)

Key to this commitment, especially among parents, was the belief that the LEAP programme was an opportunity which had to be seized:

“5: No, [Student] and [Student] are extremely busy as well.

3: With [Student] I have a 2-hour gap on a Saturday because we come from dancing, she gets fed from dancing, we drive as she's eating in the car to DCU.

5: We are all busy, it's just because we understand how important DCU is, no questions.

3: This is a stepping stone to their future.

1: That's right, and I come from Walkinstown.

3: I come from Dardistown.

5: I call her ballet teacher as well and explain, she said of course, no problem. We rearranged other things around you guys.

3: Well it is, for six weeks, it's doable.

2: Well I know if anything clashes with [Student]'s football, this is what comes first.

3: [Student] was supposed to do ballet exams last week. But because she couldn't go to all of her Saturday classes, her dancing teacher rearranged her exams for June so [Student] could take part in this opportunity.

5: People usually understand.” (Cycle 1, Spring 2017 End Parent Group Interview)

Overall, long-term student engagement and disengagement with the LEAP programme was a complex issue, one whose exact parameters were unique to each student. As the findings around this issue are undoubtedly among the most important findings of this study, they will be central to the discussion of the LEAP programme in the next chapter. Before beginning that discussion, however, there are two more important features of the LEAP programme's design which must be explored, beginning with the structuring of the programme around students' transition from primary to secondary school.

### 5.4.3 Transition

As discussed in section 2.6, the transition from primary to secondary school is both an opportunity and a potential stumbling block for high ability students from disadvantaged backgrounds. The LEAP programme was designed with this transition in mind, focussing especially on the importance of challenge to students entering secondary school and the value of preparing students for new learning experiences, two areas identified by the literature on transitions as discussed in section 2.6. Many of the school-related aspects of the transition sub-theme have already appeared in the Impact of Programme theme, but it is worth considering them all together expressly in relation to the transition to fully explore the worth of building the programme around the move from primary to secondary school. As well as that move, the LEAP programme marked a transition for many students from



CAA primary school classes to the CTYI secondary school summer programmes, and so the School Transition findings will be followed by CTYI Transition findings.

#### 5.4.3.1 School Transition

As discussed in section 5.2.1 and section 5.2.2, many of the responses about the positive impact of the LEAP programme pointed to how it helped students with the transition from primary to secondary school. The most commonly noted benefit was perceived academic preparation for new and more challenging subjects, something which in turn was often expressed alongside a reference to greater academic self-confidence among students. The positive interaction with new people and new teachers on the programme was also pointed to as good preparation for moving into secondary school. In general, students expressed a mixture of excitement and nervousness before starting secondary school, even at the very start of their participation with the LEAP programme. Attitudes towards secondary school remained somewhat ambiguous but slightly tilted towards positive sentiments throughout the programme, as can be seen by the word clouds below. While word clouds are a highly problematic tool for data representation, the data being represented here are students' responses to the question "Which three words best describe how you feel about secondary school?", meaning that the biggest issue with word clouds, namely their decontextualisation of the words involved, does not apply. In this case, word clouds are an efficient way of illustrating the range and relative frequency of various responses. Figure 5.5 shows student responses before entering secondary school, while Figure 5.6 shows student responses after starting in secondary school.



As with their love of learning and third-level ambition, then, the transition to secondary school was an area where students brought a positive attitude into the LEAP programme which was bolstered and developed rather than created by their experiences on the programme. In general, the major benefit of the programme for many students as they moved through first year was not in preparing them for challenging material in school but in providing them with adequately challenging material which they were not getting in school. By providing students with a constant level of stimulating academic content through a year of in-school academic peaks and troughs, the LEAP programme functioned as a complement to students' day to day educational experiences.

As well as spanning the primary to secondary school transition, the LEAP programme also facilitated students' entry onto the CTYI secondary school summer programmes where they could continue participating in academic enrichment courses throughout their time in secondary school. Ensuring a smooth transition from the LEAP programme to these courses was a central goal of the programme design, and the extent to which this goal was realised will now be considered.

#### 5.4.3.2 CTYI Transition

The CAA programme (Healion, 2013) and the Aiming High scholarship (Breslin, 2016) were both targeted at the same cohort of students as the LEAP programme, but there was no direct link between the two to allow students who took part in the CAA programme continue onto the Aiming High scheme. The LEAP programme created such a pathway for students, though it is important to note that this primary school-based pathway did not replace the existing secondary school-based nomination and identification stage but existed alongside it. This section will consider the LEAP programme as an entrance route to the secondary school programmes, focussing first on student experiences of the Talent Search assessment and then on the progression to the programmes themselves.

One of the early questions grappled with in this project related to whether student scores on the Talent Search could be improved by targeted preparation beforehand. The question was motivated by both the literature as discussed in section 2.4 and by the local context in the form of Breslin's (2016) study, which noted that students qualified for the CTYI Summer Scholars Programme (Talent Search scores below the 85th percentile) at a higher rate than qualified for the CAT Programme (Talent Search scores between the 85th and the

94th percentile), and for the CAT Programme at a higher rate than for the CTYI Programme (Talent Search scores above the 95th percentile). The aim of the pre-Talent Search preparation was to familiarise students with the format of the SCAT assessment and, especially in the Numerical Reasoning section, to ensure that they had at least some experience all of the various types of questions. The value of such exposure depended on the student and their school experiences, which were far from uniform across the DEIS schools students attended:

“I think [Student], [Student] and [Student] were at a disadvantage because they didn’t do calculus in primary, they didn’t do mathematics, maybe because it’s a DEIS school they didn’t cover it.

2: And they’re three smart kids, they’re well able for it. They probably needed just a little bit more time, they didn’t absorb the questions, you know. I know that’s kind of part of the test but some people are slower to go through the question and stuff. They haven’t done the same things as it were, ok I’ve spent too long on this one, maybe I’ll come back to it...

1: You’re right in saying that different schools are different. The school that they went to was a DEIS school, they’re more social workers than educators you know.

3: Our girls went to a DEIS school as well and they covered calculus. It depends on the school so it’s not the fact that it was a DEIS school.

1: They met people from other schools and they were totally more advanced than them.

3: But your kids could be advanced in different areas.” (Cycle 1, Spring 2017 End Parent Group Interview)

The actual impact of the preparation on students’ scores cannot be accurately estimated from the findings, and a study designed to measure such an impact would have required a vastly different design and a much greater emphasis on Talent Search preparation. The more I engaged with the literature and discussed the Talent Search preparation with colleagues in the field of high ability studies the more evident it became that significantly improving student scores on the Talent Search would require a huge amount of targeted instruction and deliberate practice, time which I increasingly felt was better devoted to the enrichment courses. As all students who took part in the Talent Search assessment were eligible to attend one of the summer programmes, improving Talent Search scores was ultimately less of a priority than keeping students engaged and motivated to keep attending

the LEAP programme. While students did not mention the Talent Search preparation negatively in their feedback on the programme, this may have been more to do with the fact that it only took place over the first three to four weeks of the programme than anything else. In my research diary I noted several times that students did not enjoy the preparation, with references to it being more like school than the general LEAP courses. After the first cycle, as it became clear to me that the preparation would have to be intensified significantly in order to have an impact on student scores, I decided to reduce it instead to focus on just the essential elements of the SCAT over three thirty minute workshops, after which students were given practice questions they could work on at home if they so wished.

In the second cycle, Talent Search scores were markedly lower than in the first cycle, though it is vital to note that there is no evidence of any causal link between the reduced preparation and the lower scores. In the third cycle, with the same preparation as in the second, scores were slightly higher again, though the number of students who took the Talent Search was much lower. Figure 5.7 shows the number of students who qualified for each programme as well as the number who did not take part in the Talent Search, while Figure 5.8 shows the percentage of students who took the Talent Search who qualified for each programme.

## Talent Search Results

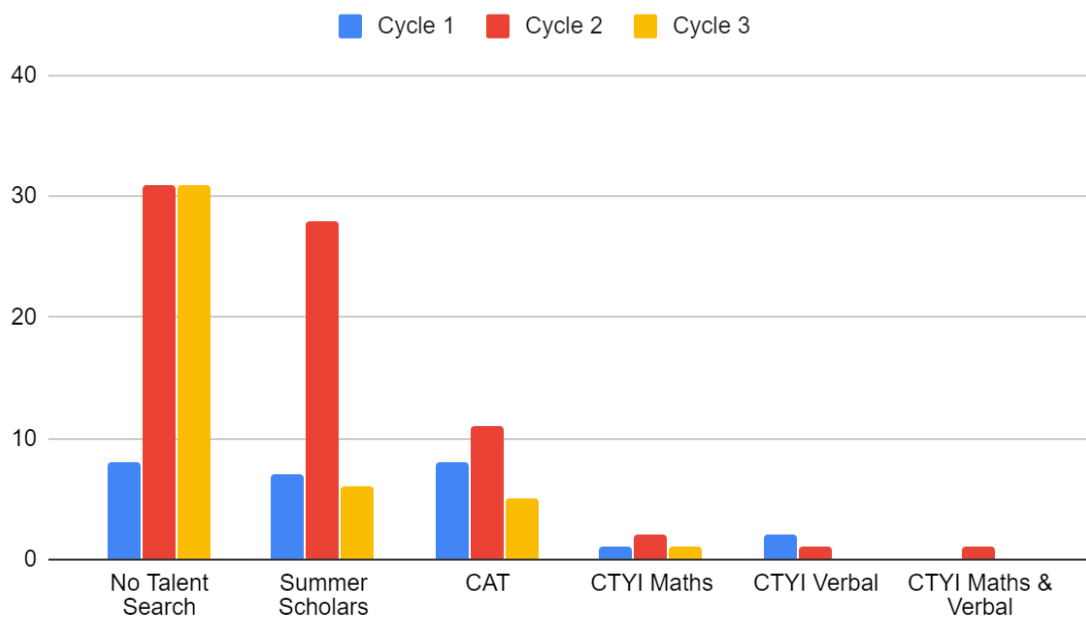


Figure 5.7: Talent Search Results by Cycle

## Proportional Qualification by Programme

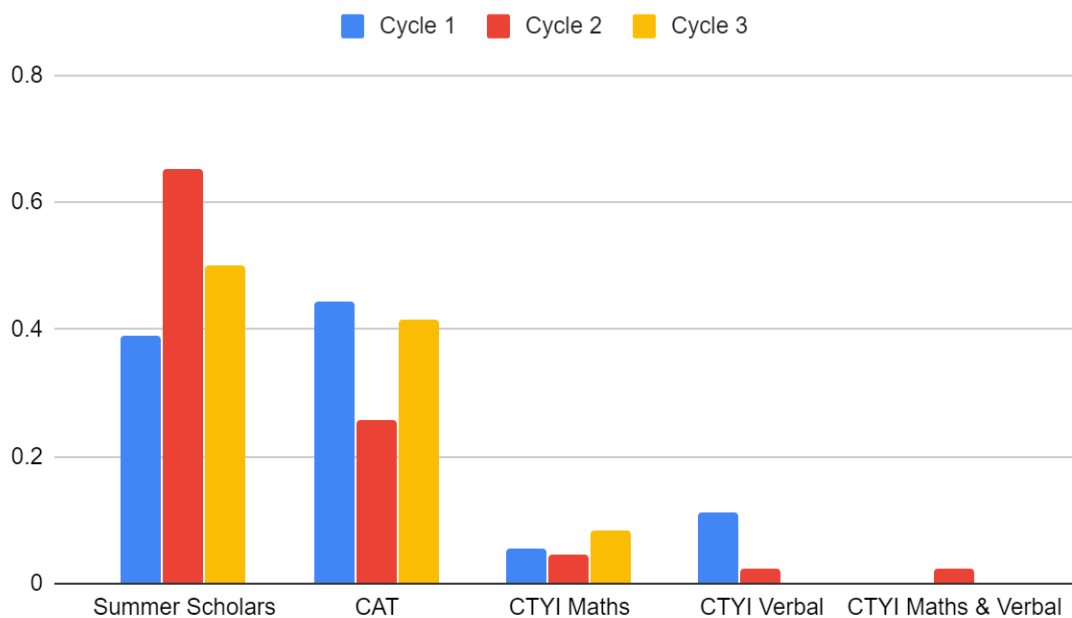


Figure 5.8: Proportional Qualification by Programme by cycle.

Ultimately, it is impossible to make any definitive claims about the impact of the Talent Search preparation. The broader question of whether a study focussed solely on examining this impact would be worthwhile will be returned to in the final chapter.

Two other noteworthy findings related to student participation in the Talent Search were captured by the codes Talent Search Anxiety and Talent Search Disappointment. The anxiety expressed within the former was founded upon a fear that an inadequate Talent Search score would lead to students being disqualified from taking part in any programmes. A particularly good example of Talent Search Anxiety was a casual conversation with a student after a talent search preparation workshop, which I recorded in my researcher's diary:

“A student, usually chatty and boisterous in class, waited after class until all other students were gone home. Then asked myself and Emily [another CTYI staff member], in a slightly subdued manner, if he would be ‘kicked off the programme’ if he ‘didn’t do well enough’ in the Talent Search. Reassured him that nobody would be kicked off anything and that Talent Search is just to find the right programme for students. Not sure how reassured he was!” Researcher diary, October 2016.

For students who may not have access to many educational opportunities, the fear of being removed from a programme which they were participating in and enjoying because they could not show that they deserved to be there is understandable if, in this instance, misplaced. Throughout the LEAP programme, and especially within the Talent Search preparation aspect of it, it was stressed that nobody would be denied a place on the summer programmes or lose their scholarship rate for it as a result of their Talent Search scores, but some students and their parents still needed to be reassured on this front multiple times. There were also students who did not take part in the Talent Search at all- as well as those who dropped out of the LEAP programme entirely some students simply declined to sign up for the Talent Search while continuing to participate in LEAP classes. The impact of identification measures on students is not something which has received much attention in the field of higher ability studies, but the responses grouped under Talent Search Anxiety made me think deeply about it over the course of this project.

Talent Search Disappointment, meanwhile, comprised responses which alluded to students feeling they could have or should have scored higher in the assessment, and was found among both CAT qualifiers and Summer Scholars qualifiers:

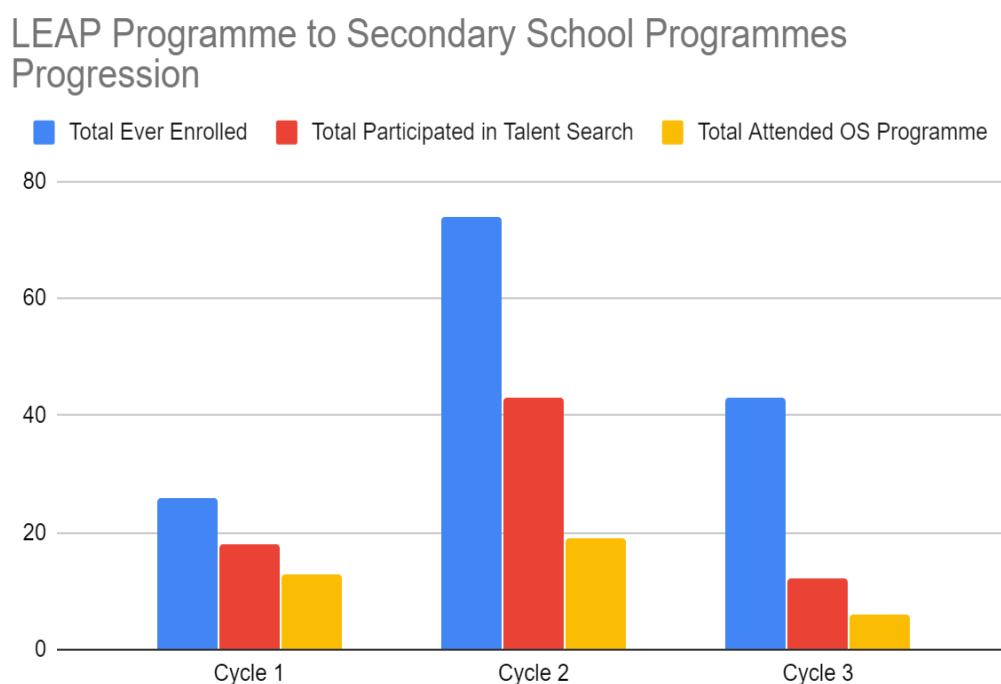
“E: Excellent. So, [Student] was saying yesterday that she was interested in doing the Talent Search again, that she wants to do CTYI.

1: Yeah, yes, we were discussing that because I think she eh she’s very... how to say... ambitious, and if she can’t achieve the highest possible level she was trying for, she must try again” (Secondary School Programme Parent Interview, July 2018)

Where initial teacher nomination had served as a boost to many students’ confidence, the more formal identification through the Talent Search had the opposite effect, knocking many students’ confidence. As well as the above findings from the study’s data collection instruments, my researcher diary records numerous informal conversations with parents enquiring about the possibility of their child resitting the Talent Search. Yet the data from the questionnaire completed by students who had progressed onto the secondary school programmes show that each was happy with the level of challenge in their class, suggesting that the identification had successfully assigned students to a course suitable for them. Overall, Talent Search Anxiety and Talent Search Disappointment show a side of high ability students’ experience with identification measures which we do not usually see,

a perspective which has contributed significantly to my own thinking on identification for programmes like the LEAP. Identification will be therefore be discussed in detail in the next chapter. First though, findings related to students' progression onto the secondary school summer programmes themselves will be explored.

The most notable finding about student progression onto the secondary school programme was numerical- Figure 5.9 illustrates the number of students from each cycle who attended a summer programme between 2017 and 2019, alongside the total number of students who took part in that cycle and the number of students in that cycle who sat the Talent Search assessment.



*Figure 5.9 Student Progression to Secondary School Programmes*

As can be seen, the proportion of students who went on to take part in the secondary school programmes was relatively low, especially in the third cycle. It is worth noting in this regard that there were students from the previous two cycles who had not attended the secondary school programme the first year they were eligible to do so but had attended subsequently. The perceived saturation of courses discussed in section 5.4.2.3 may have played a part in this, as can be seen in a number of student comments about attending the summer programmes:



“I don't mind learning but I do want a nice break of school and others” (S107, Cycle 2 Spring 2018 Initial Questionnaire)

“I liked it but I don't want to do it every summer” (S22, Cycle 1 July 2016 End Questionnaire)

Others spoke of not being available during the summer, something which was an issue throughout the study, with many students similarly unable to participate in the July term of the LEAP Programme in the second and third cycles:

“I am visiting other countries and I want to rest =)” (S118, Cycle 2 Spring 2018 End Questionnaire)

“Because I'm a very sporty person and I would be busy” (S31, Cycle 1 Spring 2017 Initial Questionnaire)

For students who did attend, the secondary school programme was a positive experience, with many comments framing it as an even better version of the LEAP programme, especially on the social front:

“I like learning and the teacher is nice and everyone is nice and medicine is really interesting” (S105, Secondary School Programme Questionnaire July 2018)

“I love the activities and hanging out with new people. I learn something new from my peers everyday!” (S28, Secondary School Programme Questionnaire July 2018)

Of those students who attended a course, almost three quarters went on to attend a second course. As discussed in section 5.4.2, the level of student engagement was a spectrum, and at one extreme of this section there were three students who attended every term of the LEAP course in 2016-2017 and then a secondary school summer programme in 2017, 2018 and 2019. Between the students who completed just one term of the programme and these students who took part in every piece of it they could, there was a wide range of participation rates. This spectrum of engagement led me to fundamentally rethink what the LEAP programme was and what it hoped to provide for students over the course of the study, and this rethinking will be explored in the next chapter. The reality of the LEAP

programme prompted this rethinking, but it was fundamentally guided by the philosophical underpinnings of participatory action research and its emphasis on agency and contingency. It is only fitting, then, that before moving on to the discussion we consider the role of action research within the LEAP programme and this study.

#### 5.4.4 Action Research

Programmes founded upon action research remain unusual in the high ability education field, though a small number of studies have successfully utilised action research to set up and improve provision for high ability students (Dodds, 1997; Hughes, 1999; Healion, 2013). Action Research shaped this study in two distinct ways; namely, changes to the programme and reflective practice. Where the former looks at how the theory of action research was put into practice, the latter describes the practice of action research being put into theory, so to speak. Reflective practice will form the basis of the next chapter, while Changes to Programme will be explored now as a code within the data

##### 5.4.4.1 Changes to Programme

The LEAP programme evolved considerably over the three cycles considered in this study, and this evolution was guided by feedback from participants and other stakeholders. Ideas for changes were sought in the questionnaires and group interviews for students and parents at the end of each term and these changes were implemented where possible. Of course, it was not always possible to incorporate all of the suggested changes, especially where people expressed conflicting ideas or wishes. The proposed Changes to Programme generally fit into two categories: academic changes (captured under the codes Better Content, More Discipline, More Games, No Homework, Trips and More Classes) and logistical changes (captured under the codes Better Logistics, Change Time, Longer Breaks, Longer Classes, Shorter Classes). There were also responses which did not want anything changed or did not know what changes they wanted- coded under None or Don't Know, these responses were by far the most common across student and parent responses:

“Nothing. It's perfect. You're doing great.” (S225, Cycle 3 Spring 2019 End Questionnaire)

“No changes =)” (S121, Cycle 2 Spring 2018 End Questionnaire)

“No! I enjoyed it all!” (S124, Cycle 2 Spring 2017 End Questionnaire)

Satisfaction with the courses overall was reflected within the parent group interviews:

“3: No, there’s no aspect that [Student] didn’t enjoy. She just loves coming, I think she just loves the whole atmosphere where they’re not treated like children” (Cycle 1, Spring 2017 End Parent Group Interview)

The biggest changes made to the programme as a result of the participant and stakeholder feedback were logistical, and mainly related to the structure and duration of available courses. As discussed in section 3.2, the Autumn term in the first cycle took the form of three self-contained one day workshops rather than a term of classes, and the feedback on this was generally negative. As a result, the structure was changed the next term to something more in keeping with what students and parents wanted, a move which was received positively:

“E: In terms of the difference between the stuff we were doing pre-Christmas where it was just a day here and a day there, did ye prefer having the 6-week block of classes?

All: Six weeks.

5: The consistency is important.

2: And they could see it coming together themselves, what they were learning every week.” (Cycle 1, Spring 2017 End Parent Group Interview)

Once this change had been made the overarching structure of the programme remained similar throughout the rest of the programme, with most of the requests for change addressing the duration of courses (both in terms of hours per class and classes per term), the content being covered and the variety of classes on offer. The first of these, coded under Longer Classes, led to individual classes increasing in length from two hours to two and a half hours and terms increasing in length from six weeks to eight weeks, bringing the total number of contact hours per term from twelve hours in the spring term of the first cycle to twenty hours in the spring term of the third cycle- and still one student called for more:

“Make it longer” (S208, Cycle 3 Spring 2019 End Questionnaire)

As well as the seemingly endless hunger for more classes, there was considerable demand for specific subjects or a wider range of subjects in general, coded under More Classes:

“3: Might try and do more a variety of course.

E: Which?

3: Like try and do a few more different options

E: Yeah, so have more choices for each term or more terms?

3: Both” (Cycle 1, Spring 2017 End Student Group Interview)

The practical changes to the course enabled by the project’s action research approach were generally well-received, although the high level of student satisfaction with the courses expressed throughout meant that no radical changes were made, even though this expressed satisfaction did not necessarily translate into continued attendance. Action research is vulnerable to disengagement because the students who would most benefit from changes to the course often disengage before their suggestions can be heard. Within the time period covered by this study no solution to this disengagement was found, but the LEAP programme will continue beyond the study and, hopefully, continue developing in a positive direction. Overall, the Programme Design theme captures both the strengths and weaknesses of a transition programme for high ability students, as well as the difficulties facing any out-of-school programme based on long-term commitment. While some of the findings within the theme may serve best as a caution rather than an example to follow, overall it presents a detailed and nuanced picture of a novel programme for high ability students from socioeconomically disadvantaged backgrounds..

## 5.5 Conclusion

The findings from this study were significant in volume as well as in meaning and this chapter has attempted to order the data and use it to explore students’ experiences of the LEAP programme. The three themes generated to meaningfully grapple with these data were each significant in their own right, and together present a multi-faceted account of the LEAP programme as a part of students’ lives. Figure 5.10 lays out these themes graphically. The Impact of Programme theme expresses clearly the various ways in which students felt they benefited from the programme. The responses captured within the theme

show, in students' own words, that the programme has had a real impact on real lives across students' academic, social and personal development. Within an action research framework, this kind of research is vital in showing that the action has been successful, that it has led to positive change in the world. Beyond this, the Love of Learning theme captures a phenomenon underpinning students' engagement with the programme, and shows how a passion for learning spans many of their whole lives. Finally, the Programme Design theme explores the strength of this engagement and the features of the LEAP programme and students' experiences with the programme which helped and hindered it. The next chapter will bring the specific findings of this study into dialogue with the academic literature to analyse the most significant aspects of the LEAP programme and their implications for further practice and research.

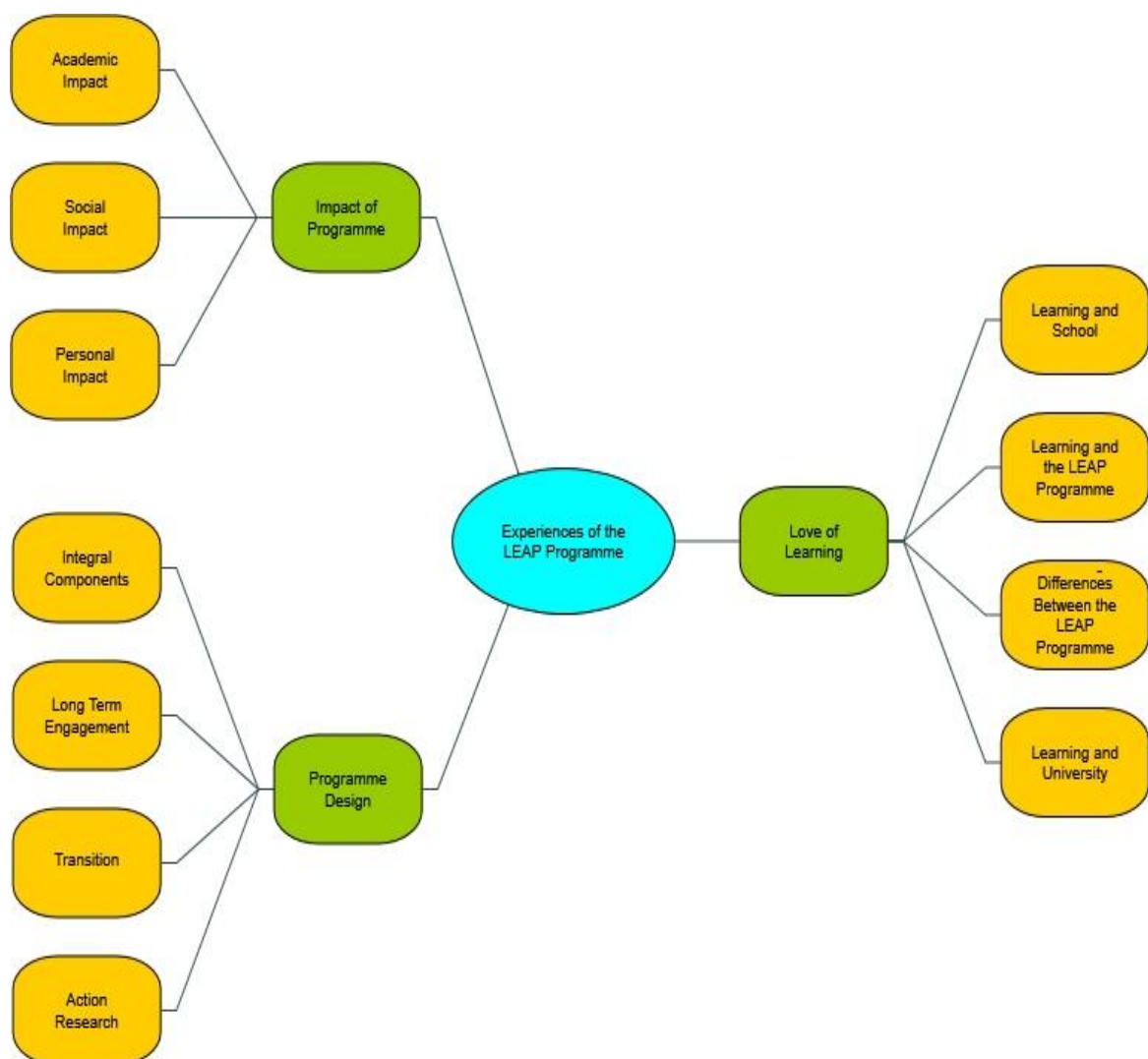


Figure 5.10 Overview of the themes outlined in this chapter

# Chapter 6: Discussion

## 6.1 Introduction

The findings discussed in the previous chapter are significant and valuable in a number of different contexts, most notably to the extent that they shed light on how students experienced the LEAP programme, how these students experience learning more generally and the strengths and weaknesses of the LEAP programme itself. While action research is grounded in the practical and the particular, it also looks further than its immediate context. This chapter will explore the findings outlined in the previous chapter in light of the existing literature in the field, moving from the research questions which guided this study to some of the deeper (theoretical and practical) questions currently facing the world of high ability education. It will begin by returning to the original research questions in order to consider the answers this study has generated. These answers will then be explored as they relate to the wider field dialectically, at once informed by and informing the existing body of knowledge in the field.

## 6.2 Research Questions

Like all action research, this project began with a lack in existing practice. In this case, the practice in question was institutional as well as personal, relating to CTYI's provision for high ability students from socioeconomically disadvantaged backgrounds and my own practice. The LEAP programme was an attempt to remedy that institutional deficiency through my own implemented practice, though it is vital to note that although this was a change in my personal practice it was most certainly not an individual endeavour. The LEAP programme existed (and could only exist) within the context of CTYI's highly supportive community of practice and took the form of participatory critical action research built collaboratively with those involved. While many action research approaches foreground the personal critical reflection of the researcher in their dataset, in this study the data collected has prioritised the voices of the students participating in the programme, as well as (to a lesser extent) their parents and teachers. My own critical reflection appears primarily in the discussion and analysis of these findings, though my researcher diary was a useful way to record observations and insights as the study progressed and thus

incorporate my reflections into the primary data collection. The research questions which guided this study highlight the focus on student voices and student experiences.

The overarching question which structured this study was the question of how high ability students from designated socioeconomically disadvantaged schools perceived their experience of the LEAP programme. A number of sub-questions gave direction to the attempts to answer this fundamental question.

- ❖ Do students feel that they benefit from taking part in the course?
- ❖ How do they perceive and describe these benefits?
- ❖ Do other significant figures (teachers and parents) in the student's life feel they benefit from taking part in the course?
- ❖ How do they perceive and describe these benefits?
- ❖ Are there elements of the LEAP programme which participants find particularly beneficial?
- ❖ Are there elements they find unnecessary or counter-productive?
- ❖ How do participants perceive their experience of the transition into the CTYI secondary school programme and their experience of the Talent Search assessment?

The findings discussed in the previous chapter grouped responses to these questions under three themes- Impact of Programme, Programme Design and Love of Learning. While the first two themes flow directly from the research sub-questions (specifically the first to the fourth questions for Impact of Programme and the fifth and sixth questions for Programme Design), Love of Learning was endemic in the data collected without originating from a specific research question or indeed featuring in a specific question in the data collection instruments. At no point were students asked how they felt about learning or anything similar, rather they expressed their positive sentiments towards learning in response to general questions about the programme, school and university. It is clear, however, that Love of Learning relates to the overall research question- it was central to students' perception of their experiences of the programme. As well as shedding light on how students experienced the programme, it gives a vital insight into the deeper question of *why* they experienced it as they did. This *why* will be at the heart of the discussion of each of the themes, a discussion which will also draw on the wider literature in order to go beyond the research questions and discuss the deeper aims of a programme for high ability students

from socioeconomically disadvantaged backgrounds. Before beginning the discussion of the Impact of Programme theme, it is worth framing some “discussion questions” which will be addressed in this chapter as the research questions were in the previous chapter.

### 6.3 Discussion Questions

The discussion questions sit at one level of abstraction from the research questions, guiding how I approach the discussion as the research questions guided my approach to the research itself. The fundamental discussion question reflects but reshapes the fundamental research question: “What makes a good programme for high ability students from socioeconomically disadvantaged backgrounds? Why?” The discussion question will also be broken down into further sub-questions in order to structure the response:

- What should the goals of an out-of-school academic enrichment programme be?
- How should students be identified to take part?
- Which elements of programme design are effective or productive and which are ineffective or counter-productive?

The next three sections of this chapter will be structured around the themes generated from the findings of this study, with the discussion driven by the discussion questions as they relate to the themes and the findings more generally. Ultimately, the responses generated to these abstract questions are not an abstraction, but are rooted in the concrete practice enshrined within this study, and especially in the data collected from students and other stakeholders. In other words, this chapter will give very particular answers to essentially general questions. These answers are not intended as the final word or totalising truth, but must be understood as one account in the company of many others. There is no single method which will guarantee a successful programme, no one truth which covers all high ability students and their strengths, needs and desires. It is only through a polyphonic approach that we can create the various effective methods which lead to worthwhile programmes and construct the many truths which capture the lived experiences of high ability students. The discussion will begin with an exploration of what the various impacts of the programme outlined in the previous chapter (see section 5.3) mean for the LEAP programme and for programmes for high ability students from socioeconomically disadvantaged backgrounds more generally.



## 6.4 Impact of Programme

The findings from the Impact of Programme theme were almost universally positive, showing that students, parents and teachers felt that there were benefits to participation across three distinct areas- students' academic, social and personal lives. These findings are broadly in line with previous research on out-of-school academic enrichment programmes both within CTYI (Healion, 2013; Breslin, 2016) and in the US (Olszewski-Kubilius et al., 2017; VanTassel-Baska, 2007). Yet there were also nuances within the findings which go beyond or even against the literature in interesting ways and raise new questions about best practice in provision for high ability students from socioeconomically disadvantaged backgrounds.

### 6.4.1 Academic Impact

Academic benefits were the most widely reported on by students, suggesting that they perceived the academic aspects of the programme to be the most important part of it. Within the Academic Impact sub-theme there was a small number of students whose responses were coded under No Impact. These responses were generally in response to a question on whether students felt that their participation on the LEAP programme had had any impact on their experience of school, and many of the No Impact responses to this question were from students whose responses to more general questions about the impact of the LEAP programme were coded under Interest Academic Content. The Interest Academic Content code was not dealt with in detail in the findings due to its overlap with the Love of Learning theme, but it is important to note here that many students who felt that what they learned was the most important impact of the programme valued this learning for interest rather than utility reasons. The implications of this finding will be considered in relation to the Love of Learning theme in section 6.6.

There were also many students who discussed the impact of the programme in terms of utility value (as well as students who articulated both interest and utility benefits, in responses to different questions or within the same sentence). The Impact in School sub-theme captured these instrumental academic benefits, and mostly comprised responses coded as Learned Useful Knowledge and Skills. Students pointed to how they had been able to directly transfer what they learned on the programme to a school context. In other words, the development of students' Actiotopes during the LEAP 'learning episodes' lead

to them executing better actions in their day-to-day classrooms. While this is obviously a positive impact of the programme for individual students, there were a cluster of responses within Learned Useful Knowledge and Skills coded under Head Start which raised questions about the wider impact of the programme.

The Head Start code was applied to responses which framed the academic benefits of the programme in terms of the perceived advantage it gave students over the rest of their class in specific subjects. One of the clearest articulations of the Head Start was from a survey in the March 2017 term of the second cycle:

“It is because doing these courses are not something that everyone can do. So it's good to learn it and understand more things than others” (S107, Cycle 2 Spring 2017 End Questionnaire)

While it is undoubtedly positive that students on the programme felt that they knew and understood more than others as a direct result of their participation, the fact that these others were the students in their DEIS classrooms brought to mind the Matthew effect (see section 2.6). As an action research project, it is vital that the impact of the programme is not considered solely in terms of participating individuals, and the Head Start code is an important reminder that the LEAP programme did not take place in a vacuum but within a wider system. As this study progressed, I began to see the LEAP programme as caught between two Matthew effects: on the one hand, the goal of the programme was to address the socioeconomic disparity in provision for high ability students, on the other hand, by providing such provision to some students the programme gave rise to a new disparity within students of a shared socioeconomic background. The more effectively the inter-socioeconomic gap was narrowed by the programme, the wider would be the new intra-socioeconomic gap caused by participation on the programme. The dilemma posed by the code is, ultimately, an issue of identification- the fact that the programme has concrete benefits for those who take part over those who do not places great importance on the choice of who can take part. The question of identification will be returned to in the discussion of the Programme Design theme, and the Head Start code will inform how I argue identification should be approached.

Regardless of how students are identified, however, it is inevitable that participants in the LEAP programme will be in classrooms where many students have not taken part in the

programme. One student referred to sharing their knowledge with others, creating a ripple effect for the impact of the programme beyond those who attended. Rather than getting an edge in competition with other students, this student saw themselves as having greater capacity for co-operation with other students. Such an altruistic approach to knowledge suggests another way of thinking about the Head Start code, albeit one which was rare within the data collected. Learning is not, after all, a zero-sum game, even if opportunities for formal learning episodes like the LEAP programme currently are. Potential ways to inspire other students to bring what they have gotten out of the programme into their classrooms to share with others will be discussed in the next chapter.

The final perspective on the Head Start code relates to how the knowledge one student brought from the LEAP programme to their school classroom lead to the possibility of them doing higher level maths for their Junior Certificate. Research suggests that students in DEIS schools are much less likely to take higher level subjects, particularly maths (Smyth, Banks & Calvert, 2011). Unsurprisingly, there is a strong link between taking higher level subjects for the Junior Certificate and taking higher level subjects for the Leaving Certificate (Smyth & Calvert, 2011), as well as between taking higher level subjects for the Leaving Certificate and progressing to third level (Smyth, Banks & Calvert, 2011). Increasing the likelihood of students attempting higher level subjects may therefore have serious long-term benefits for the student. The increased likelihood could be the result of internal factors, external factors or both. The confidence students gain through having mastered challenging material may make them more likely themselves to choose to attempt higher level subjects. Others in their life (teachers and parents) may see what they have learned from the programme or the very fact of their attendance on the programme as proof that they are capable of taking on more difficult material and encourage or enable them to tackle higher-level subjects accordingly. For this student, to stretch the metaphor to its limits, the Head Start was necessary to have any chance of completing the race at all.

Overall, the Learned Useful Knowledge and Skills code showed that many students felt that what they had learned from the programme had a positive impact on their day-to-day school lives. Another code within Impact on School, Metacognitive Skills, also pointed to the development of students' Actiotopes transferring to the school context, this time through what they learned about learning rather than about specific subjects. Although metacognitive skills are described as a vital component of provision for high ability students by VanTassel-Baska (2018), they were not explicitly taught on the LEAP

programme. The instructors teaching each class are experts in their field but not in pedagogical practices. Over the course of the programme ways to integrate metacognitive skills into the classes were discussed: material on teaching metacognitive skills could have been disseminated to instructors to include in their teaching or metacognitive skills could have been taught by someone with experience and expertise in delivering such content. Ultimately, I felt that the former would either require too large an investment of time and energy by instructors or else lead to low quality material delivered for appearance's sake, while the latter would disrupt the classes too much. Without explicit instruction, a small number of students appear to have derived these skills themselves, possibly based on their exposure to different styles of teaching and learning. All of the responses coded under Metacognitive Skills came from questionnaires completed during the final term of LEAP programme, suggesting that this was an impact which students observed only after a significant engagement with the programme across a number of classes.

Overall, the relatively small number of responses coded under Metacognitive Skills suggest that this implicit approach works for some students but not for most. There is also the possibility that the small proportion of students who mention metacognitive skills in their responses may be due to other students' difficulty in articulating such skills- even those responses coded under Metacognitive Skills were struggling to express exactly what they meant. On the whole, I believe that the LEAP programme was better off focussing exclusively on specific subjects rather than trying to incorporate both subject content and metacognitive content (or other potentially worthwhile content like motivation work or socioemotional support) as the subject content was received positively by students as both challenging and enjoyable (a result of CTYI's expertise in designing such courses). Material on metacognitive skills would have been a new development, and thus perhaps a moving part too many for this project with its many other innovative features.

The Academic Impact sub-theme overall shows that most students felt that the LEAP programme had significant academic benefits for them, both in school and beyond. From interesting knowledge to useful knowledge to knowledge about how best to acquire further knowledge, students valued what they learned on the programme across a number of fronts. Some of this learning was explicitly aimed at by the programme, but much of it was implicit in the structure and content of the programme, especially the metacognitive skills picked up by a small number of students. The other programme benefits recorded within

the Impact of Programme theme also resulted from both the explicitly encoded programme design and the implicit encouragement of the programme structure.

#### 6.4.2 Social Impact

Learning is not just an individual endeavour but a social process. One of the Actiotope model's greatest strengths is that it allows us to consider the entire system in which students' Actiotopes develop, a system which includes the Actiotopes of the other students in the classroom. I believe that students' social experiences have not yet been adequately explored within the Actiotope model despite the centrality of these experiences to students' overall experiences of 'learning episodes'. Part of the reason for this may be the inherent difficulty in quantifying and measuring such experiences, especially using large-scale quantitative methods. There is also the possibility that social benefits are not considered inherently valuable in the way that academic benefits are, that their worthiness is seen as something which requires justification, perhaps even defense. The qualitative approach taken by this study has been especially suited to exploring the social impact of the programme because it allowed students themselves to decide on and express the significance of this impact. While students did not emphasise the social features of the LEAP programme as heavily as its academic features, many did point to the friends they made on the programme as one of the most important things they got out of the programme. This, I believe, is a reflection of the emphasis placed by the programme on creating a positive atmosphere and encouraging interaction among students rather than focusing purely on academic content.

Beyond making friends and enjoying the social side of the programme, some students pointed to the programme as having given them a positive experience of diversity by introducing them to a wide range of students. Other students spoke of learning new social skills from the programme, with some pointing to this as useful in the context of their upcoming transition to secondary school. As well as broadening their academic horizons, then, the LEAP programme widened students' social lives, giving them a place to meet new people as well as practice at the process of meeting new people. The transferable skills and lasting networks forged on the programme have the potential to continue positively impacting students' lives far beyond their involvement with the programme itself.

Perhaps the most interesting code within the Social Impact sub-theme was Positive Like-Ability, which was applied to responses which mentioned the benefits of being in a class with other high ability students. Positive Like-Ability was most notable in where it appeared in the data, and where it did not appear. The code was exceedingly rare among student responses, appearing just once across all of the student data collected, but it appeared numerous times in the parent and teacher responses. There is the possibility that ability simply did not enter into students' perception of other students, that they saw other shared qualities as more important. In short, like-ability may have been less treasured by students than general likeability. Parents and teachers also have a slightly detached perspective on students' lives, and thus are able to observe aspects of their experiences which students themselves may not notice, and it is possible that the Positive Like-Ability responses were one such aspect. Alternatively, the differing levels of emphasis given to the like-ability class grouping may be the result of the difference in priorities between students and their parents and teachers when it came to the social side of the programme. Students were focussed on the here-and-now and the general pleasure of new friendships, while the adults in their lives took a more long-term view of their socialising, seeing it as bound up with their academic development and future prospects. These are not contradictory views but complementary attitudes on the social impact of attending the LEAP programme. The social impact of homogenous ability grouping is an area of disagreement within the literature. Some researchers argue that being surrounded by like-ability peers is beneficial to students' social development (see for example Vogl & Preckel, 2014) while others point to the potential issues arising within homogenous classrooms. Hertzog (2003) reports some students feeling under greater pressure to perform in homogenous classrooms while Seaton, Marsh & Craven (2009) point to the damage the Big-Fish-Little-Pond Effect can do to students' self-concept. The findings from students participating on the LEAP programme suggest that students experienced the social side of the homogenous classes positively, but do not tell us they did so because they were homogenous. On the other hand, students did not point to any negative impacts of the social side of the programme resulting from the homogenous ability grouping either.

The overall social impact of the LEAP programme was a positive one for most students-most students enjoyed the social side of the programme and many felt that they had made new friends on it. A smaller number also felt that they had learned new social skills and benefited from meeting a diverse group of people on the programme. Parents and teachers treasured the homogenous ability grouping, although students almost entirely neglected to

mention the grouping. While these impacts are less obviously beneficial to Actiotope development than the academic impacts of the programme, I would argue that they are in fact vital in three different ways. First, they help to sustain students' interest in learning by enhancing their positive sentiments towards learning episodes like the LEAP programme. Second, they give students a peer group with shared interests and a shared commitment to education beyond the school classroom, something which Deci & Ryan (2002) point to as particularly important for students entering their teenage years. Finally, and perhaps most importantly, the Actiotope model presents a systemic view of children's lives, and positive relationships and social experiences are an integral part of any individual's holistic wellbeing. Adding to this wellbeing by giving students a space in which to make friends and share joyful learning experiences is worthwhile in its own right, but it is also likely to contribute to sustainable personal development. As well as an indirect social impact on personal development, students, parents and teachers also noted the programme's direct impact on students' personal development. Grouped together under Personal Impact, these direct benefits will now be explored as the final sub-theme within the Impact of Programme theme

### 6.4.3 Personal Impact

The Personal Impact sub-theme featured the perceived benefits of the programme for students' personal development, captured under the two codes of Confidence and Aspiration. The growth in confidence some students experienced on the programme appears to have come from a number of sources. Firstly, the fact of being recognised by teachers in the nomination process was pointed to as a boost in academic self-concept by many students in the early stages of the programme. Secondly, some students' confidence was bolstered by what they had learned on the programme- either because they got to put it to use or display it in front of others or simply because they now saw themselves as people who knew things.

Thirdly, parents and teachers reported on students growing in confidence as they continued to take on and master new and challenging subjects over the course of the programme. Interestingly, there were no student responses which fell into the latter category- I believe that a factor in this was that many students were quietly confident in their ability to handle whatever was thrown at them throughout the programme. The link between confidence, interest and mastery mentioned in section 5.3.3.1 further illuminates this sustained self-belief.

Students enjoyed learning at school and generally felt that they were good at it, giving them the confidence to seize the opportunity to learn more on the LEAP programme. Each further successful ‘learning episode’ sustained this link, but did not necessarily increase student perceptions of their own confidence because it had been high to start with. Many of the students had taken part in academic enrichment programmes with the CAA programme before starting the LEAP programme, and this may have given them greater confidence coming into the programme. Indeed, one of the findings from Healion’s (2013) study of the CAA programme was that it gave many students greater confidence in their academic ability. For the other students, however, it appears that the confidence they brought to the LEAP programme was born of their own successes in life up to that point, as well as the supportive atmosphere in their previous educational experiences and wider lives.

A similar dynamic is evident in the responses coded under Aspiration. Aspiration was already sky high when students started on the programme- almost all said that they wanted to go to university when they were older and the ‘dream jobs’ listed included lawyers, doctors and even one professor of mathematics. The desire to complete a university education, and the belief that doing so is possible is, as discussed in section 2.3.3, something to be celebrated among high ability students from groups which are currently massively under-represented in Irish further education. That most students already expressed this desire at the start of the programme points to their own self-confidence and their family and wider community’s successful fostering of high aspirations. The positive impact of the LEAP programme on these aspirations complemented these personal, family and school efforts, helping students develop their general belief in themselves and desire for a third-level education into the awareness that they could handle advanced academic classes and giving them practical knowledge about university life in general and specific subjects in particular. Perhaps most important in this context is that after the LEAP programme students were eligible to continue participating in CTYI secondary school courses until they completed their Leaving Certificate- a long-term pathway for students to continue honing their future aspirations.

The Personal Impact sub-theme shows that the LEAP programme had a positive impact on confidence and on aspiration for some students, but it also shows the high level of confidence in their own ability and the soaring aspiration many students brought into the programme. Overall, students and their parents and teachers perceived academic, social



and personal benefits from attending the LEAP programme, suggesting that it was accomplishing its goals on these fronts. For a clearer picture of how it did so, as well as an exploration of areas where it did not, we must turn to the Programme Design theme.

## 6.5 Programme Design

The LEAP programme achieved many of its aims, as evidenced by the various positive impacts the programme had on students discussed in the previous section. Overall, I would argue that it was (and, at time of writing, continues to be) a successful, worthwhile intervention for high ability students from socioeconomically disadvantaged backgrounds. This section will consider the various elements of the programme which contributed to this success, while also looking at some of the challenges facing a programme which was organised around students' transition from primary to secondary school. It will begin by looking at the Integral Components sub-theme and the impact of the quality of the LEAP instructors, the university environment in which the classes took place and the use of teacher nomination to identify students for the programme, contextualising each within the existing literature. The question of why some students continued attending throughout the programme while others stopped will then be explored through the findings of the Long-Term Engagement sub-theme. The Transition sub-theme will then be used to discuss the benefits of situating a programme at the transition from primary to secondary school, as well as the difficulties posed by structuring a programme around institutional transitions. Finally, the value (and values) the action research approach brought to the programme will be discussed.

### 6.5.1 Integral Components

Instructors are a vital component of any academic enrichment programme, and the findings coded under Instructor Quality demonstrate the impact of a great teacher on students. Recruiting instructors and teaching assistants who believed in the LEAP programme's goals and shared its vision of education as something which should be challenging, enjoyable and social in equal measure was vital to achieve this quality. Supporting staff throughout their engagement with the programme was, I believe, also crucial to the success of the programme and the positive sentiments expressed by students towards their instructors. Before the classes started, staff attended a one hour workshop on working with

high ability students from disadvantaged backgrounds and throughout the term I talked to each instructor and teaching assistant individually before and after each class to identify any issues they were having in class and advise them accordingly. In terms of transferability, therefore, the lesson to be taken from this study is that the importance of hiring the best staff and giving them support throughout the term cannot be overstated. My experience has been that the “best” staff for a programme like this are not necessarily those with the most expertise in the field: the LEAP programme classes were taught equally well by Masters degree students, PhD. students, university lecturers and practicing professionals (including a journalist, a barrister and a physiotherapist) alike. Rather, the “best” staff are those who understand the unique challenges faced by high ability students from disadvantaged backgrounds and are aware of how ability might manifest differently in these students, and who are committed to incorporating this knowledge into their teaching. In my opinion, there is not enough focus given to instructors in the literature, perhaps because such knowledge is more likely to be held implicitly by experts in the field than recorded explicitly. It is difficult to formalise the qualities discussed above, and more difficult again to formulate a research design which would evaluate the extent to which such qualities were held by instructors, not to mind the impact of these qualities on teaching. Action research studies carried out by teachers within mainstream classrooms such as Hughes’ (1999) project show that qualitative, reflective approaches offer a way to begin to explore the issue.

The benefits of the university environment, meanwhile, have been outlined in detail in the literature- from VanTassel-Baska, Landau & Olszewski’s (1984) early review of summer programmes based in universities to more recent work focusing on underserved groups like Wu & Gentry’s (2014) study of Native American students’ experiences on one such programme. The positive perceptions of the university environment voiced by students, teachers and parents in this study give a vital stakeholder perspective on these benefits. Students were genuinely excited to be on a university campus, and the experience of attending classes in DCU gave them a sense of attachment to the university itself. Many students stated that they were considering attending DCU in the future as a result of this attachment, an attachment which blended with DCU’s geographical proximity for some students. The finding that DCU was perceived as close, familiar and welcoming by students and their parents is particularly important in the context of the third-level attendance rates among students who live in the areas close to DCU from which the LEAP students were drawn. As discussed in section 3.3, in Dublin 17, this rate was just 15%,

compared to 47% for Dublin as a whole (HEA, 2015, p. 44). The most encouraging thing about the findings from the University Environment code is that for many students it was not a result of the LEAP programme alone but also of other interactions the students had had with DCU. Most of these interactions were through attending the CAA programme, but some students had experienced other DCU Access outreach schemes. In short, for students attending the LEAP programme DCU was a regular feature in their lives over a sustained period of time, and this gave them a positive perception of the university which may impact on their decisions around third-level further down the line.

As well as benefiting students, the university environment had a hugely positive impact on the programme itself. Existing infrastructure within DCU made logistical issues like organising classrooms and hiring and paying staff much more straightforward, allowing more of the programme's resources to be put to the design and execution of the programme itself. The relationships between CTYI and other departments in the university and between the university and the DEIS schools which students attended were also crucial to the smooth running of the programme. Even though the LEAP programme was a new initiative, it was not starting from scratch as a result of these relationships. In terms of transferability, then, a university setting is not essential to a programme like the LEAP programme, but there are very strong arguments in favour of it across a number of levels.

While the Instructor Quality and University Environment codes were straightforwardly positive and aligned with the literature, the findings around identification for the programme were more complex. The use of teacher nomination to identify students for the programme is supported by the literature, particularly the literature on high ability students from disadvantaged backgrounds. (Cross & Dockery, 2014). Yet there are also strong criticisms of the use of teacher nomination (McBee, 2006; Matthews & McBee, 2007). Many of these criticisms are rooted in the ultimately subjective nature of teacher nomination, a subjectivity which formal teacher nomination instruments like the HOPE Scale (Peters & Gentry, 2010) seek to remove from the process. Some criticisms of the subjectivity of teacher nomination even point to the subjective judgement required being especially problematic for traditionally under-represented groups of students (McBee, 2006). Teachers are not immune to implicit biases and may hold ideas about what kind of students are likely to be high ability or what high ability looks like rooted in images of the dominant social classes. For a programme drawing exclusively from designated socioeconomically

disadvantaged schools, I think that there is less cause for concern about students not being selected due to their background. This is also perhaps the greatest benefit of setting up and running a homogenous programme for high ability students from socioeconomically disadvantaged backgrounds- if only such students are eligible then they cannot be ignored or excluded.

Such a perspective, however, does demand a reconceptualisation of the identification process. By offering two places to each school linked to the programme, the identification process asked teachers to find the most able in their school rather than students who they felt preformed at a particular standard of ability. In other words, unlike most programmes for high ability students the LEAP programme did not aim to identify all students of a particular ability level within the linked DEIS schools but to identify the students with the highest ability level within these schools. As discussed in section 5.4.3.2, many of the students would not have been identified by most high ability programmes on the basis of their Talent Search scores. Yet these students participated in the LEAP programme, enjoyed it and reported benefiting from it academically, socially and personally. Within the parameters of the programme, then, the initial identification was successful in selecting students for the programme.

The strengths and weaknesses of teacher nomination can perhaps be seen most clearly in contrast to the other identification process featured in this programme, the Talent Search. The Schools and Colleges Ability Test (SCAT) used within the Talent Search is designed to be an objective and accurate assessment of students' qualitative and quantitative reasoning skills (Barnett, Albert & Brodie, 2005). As discussed in the previous chapter, students were placed into the CTYI, CAT or Summer Scholars programme based on their score in the SCAT, and student enjoyment of their programme and perception of its level of academic challenge suggest that this was an effective approach. Yet the Talent Search also sparked anxiety among students, many of whom feared that they would lose their place on the programme if they did not do well enough, and some of whom were so antipathetic towards the idea of taking another test that they chose not to do the Talent Search at all. Where the teacher nomination was mentioned by many students as a confidence boost, the Talent Search had the opposite effect for several students. Which identification method, then, was better?

This question speaks to a tension between the purely merit-based identification processes which exist within the field of high ability studies and the sociopolitical aims of a programme for children from socioeconomically disadvantaged backgrounds. The fact that an assessment is fair in the technical sense (i.e. psychometrically valid, reliable and unbiased) does not mean that distributing opportunity purely according to results on this assessment is fair in a moral sense. Socioeconomically disadvantaged students are a group defined by their exclusion from various forms of capital which contribute to educational attainment- to exclude them from high ability programmes because they do not display sufficient ability compared to a normative sample group with (on average) much greater access to these forms of capital continues and exacerbates this exclusion. Yet the greater pace at which a programme of equally high ability students can move and the greater depth of content it can cover are two of the biggest advantages of such programmes. Overall, I believe that the two separate approaches to identification within this programme worked well together. The existence of three different programmes for students based on their SCAT results was crucial to this success, as it meant that all students qualified for one of the programmes. I believe that the SCAT has therefore been modified appropriately for use with high ability students from socioeconomically disadvantaged backgrounds in this study.

With regard to the initial identification, while the LEAP programme deliberately took a less restrictive approach to initial identification than many other programmes, the identification process was still restricted to two students per school. This was felt to be the maximum number that the available resources could support. As discussed in section 3.2.1, I see teacher identification as the least problematic way to allocate places to students from the cohort targeted by this programme, but it is not perfect. Providing guidance as to what teachers should focus on in nominating students (in terms of putting forward students who are both high ability and from an underserved socioeconomic background), engaging with them over any questions they might have and building up relationships through long-term collaboration are vital in making teacher identification an effective component of a programme like the LEAP. Were more resources available, however, I believe that there would be a strong argument for opening up the LEAP programme to all students in the linked schools who were interested in the programme. The commitment to attend classes on a Saturday afternoon and during the summer may be identification process enough. In their living theory of gifted education, Hymer, Whitehead and Huxtable (2009) take a critical approach to the idea of gifted education, beginning with a reconception of the word

gifted itself. They suggest a process of identification through provision, of letting students show their suitability by participating ably and diligently. While the teacher nomination was successful within this programme, it was still premised on exclusion, even as it sought to include students to the greatest extent possible. Getting rid of this barrier to entry was not possible within the scope of this study, but it is an approach which I believe may be worth exploring in the future. Widening the identification process would also resolve the Head Start issue discussed in section 6.4.1 by making the head start available to all students who are willing to put the effort in. There is, I admit, an element of utopianism to this idea (especially given the current economic realities facing third-level institutions), but if we are serious about making real changes to students' lives we must also be willing to implement real changes in our own practice.

### 6.5.2 Long-Term Engagement

One such serious change to previous practice which was central to the LEAP programme was the depth of its 'sustained commitment' (Olszewski-Kubilius, 2007) to students. The importance of a 'sustained commitment' was noted by Breslin (2016) in her discussion of the students who attended CTYI secondary school programmes multiple times under the Aiming High scholarship. The LEAP programme deepens and extends this commitment, offering students four separate terms of classes within the space of fifteen months rather than one term per year and ensuring that students who take part in these classes can continue onto the secondary school programme if they wish. This sustained commitment was utilised to the max by some students, and was noted as the greatest strength of the LEAP programme in responses from students, parents and teachers. In terms of the benefits students derived from the programme, it is not a simple case of linear addition with each term completed. Being able to take part in a range of different courses meant that students were not only learning new knowledge but were learning new knowledge across a range of domains, something which they noted as useful to their present and future academic endeavours. Socially, students who made friends on one term of the programme saw those friends again on subsequent terms, giving them a better opportunity to form lasting friendships rather than fleeting contacts.

It is important, however, to note that not all students remained engaged in the programme all the way through. As discussed in section 5.4.2, students stopped attending between each of the terms every year, and some students attended every term of the LEAP programme

but did not go on to attend the secondary school programmes. I was unable to collect formal data from participants who stopped attending so I cannot explain the disengagement from their perspective. The data I was able to collect suggests two factors which do not appear to have impacted on the disengagement- students' enjoyment of previous courses and the encouragement they received to attend did not appear linked to continued attendance. One factor which the data suggest was important to engagement and disengagement was the variety of courses available. Simply put, the more choices available the more likely students would find something they were interested in doing. This is a common-sense idea with an obvious solution, but unfortunately this solution is not feasible with the resources currently available. In the future, however, I believe that it is definitely something to consider, especially if accompanied by a more open identification process as discussed above.

The other major factor in disengagement was the time taken up by the programme. The LEAP programme represented a sustained commitment by CTYI to participating students, but it also demanded a sustained commitment from these students. The difficulty of juggling Saturday classes with other extra-curricular activities, schoolwork and students' ever-diminishing free time was mentioned by students and parents alike. Several parents gave clashing commitments as the reason their child was no longer going to attend in informal conversations. While I initially thought of the LEAP programme as a set menu in which every student would take the whole four courses, over the three cycles the benefits of an à la carte option became clear to me. As I reflected on the structure of the programme and how it fit in with the rest of students' lives I realised that I had not adequately considered that the LEAP programme was not entering into empty lives but jostling for space with everything else they had going on. Ultimately, I see the varying levels of engagement among participating students as underlining the value of flexibility in the programme. A structure within which students who wish to can attend every term but in which students do not have to attend every term will maximise engagement and help students integrate the programme into their wider lives. This flexibility is made especially necessary by the fact that students are navigating the move from primary to secondary school as they move through the programme.

As well as making the LEAP programme more flexible and responsive to student's academic and logistical needs and interests, engagement could be improved by building stronger links with students' wider lives. In particular, forging stronger partnerships with

schools and parents would embed the LEAP programme more deeply into students' education and increase the support they receive in attending. In particular, I was surprised by how often my making a phone call to parents was the difference between students participating in a term or not. Systematising and formalising this human contact and expanding it to include check-ins with parents during or after terms would require a sizable investment of time but would also, I believe, reduce disengagement.

### 6.5.3 Transition

The situation of the LEAP programme at the transition from primary to secondary school was a novel feature of this study, with no similar programmes described in the literature. The data collected from students and their parents suggests that the timing was beneficial to many students, with the programme giving them the skills and confidence to take on new challenges and meet new people at a particularly salient juncture in their lives. As students continued through first year and got past the challenges of settling in to their new schools, the programme ensured that they still had an opportunity to be challenged academically. Crucially, this challenge was utterly distinct from the increased level of homework and exam-stress involved in students' secondary school experiences, giving students a concrete positive academic experience to keep their passion for learning alive.

While the LEAP programme may have helped students with their transition to secondary school, the transition to secondary school certainly did not help the LEAP programme keep track of students. Firstly, the institutional differences between primary and secondary school made it difficult to establish a link with someone in the secondary schools who was as familiar with individual students as their primary school teachers were, especially as these students had only just entered the school. Secondly, most of the students who stopped participating in the programme did so after either the March or July terms, meaning that their secondary school was never aware of their attendance on the programme. Keeping links with the schools across the transition became even more difficult with the entry of the EU's GDPR legislation in 2018, which made sharing information about participating students with schools even more complicated. On the whole, setting the LEAP programme at the transition helped many students with the move to secondary, but it also created a host of complications, many of which were not resolved within the three cycles covered by this study. Overall then, while a transition programme is a worthwhile intervention for high



ability students from socioeconomically disadvantaged backgrounds, the nature of such a programme does pose distinctive challenges.

The LEAP programme was also intended to serve as a bridge between CTYI's primary and secondary school offerings for this cohort of students, and across the three cycles considered in this study many students made full use of this opportunity. Students who did continue on to the secondary school programme reported enjoying it, using much the same language as they used for the LEAP programme. All students from whom data was collected enjoyed the academic side of the programme, with each of them saying that the course was challenging enough for them without being too challenging. The level of course variety offered by the secondary school programmes was remarked upon positively by students, something which I believe adds greater weight to the argument in favour of expanding the course variety available on the LEAP programme discussed above. The issue of flexibility also arose in data on the secondary school programmes, sometimes positively and sometimes negatively. The fact that programmes were only available during the summer was pointed to as the reason some students would not be able to attend. The choice of two different sessions, however, was pointed to by some students and parents as preferable to the single week available on the LEAP programme. The benefits of flexibility extended to the varying levels of engagement possible within the programmes themselves. Some students greatly appreciated the expanded social scene offered by the secondary school programme, especially the opportunity to take part in social activities outside the classroom, while others chose not to partake in after-class activities at all.

As a transition pathway, then, the LEAP programme prepared students for a smooth entry into the CTYI secondary school programmes. Yet, a significant number of students did not take the pathway offered by the LEAP programme. Some students appeared to be put off by the Talent Search, even when it was explained that every student who sat the Talent Search would be eligible for a secondary school programme. For a very small number even the scholarship fee charged under the Aiming High scheme (€75 for the Summer Scholars and CAT programmes and €100 for the CTYI programme) was too much. For others, the different logistical realities of the secondary school programmes proved difficult to navigate. Applications to the LEAP programme were generally posted out a month before terms began, with applications often accepted even the week leading up to the course. Applications for the CTYI secondary school programmes, on the other hand, opened six months before the classes began and often filled up two months or more before the

programme began. Navigating the different application process was something I tried to prepare parents for, both in person during the Autumn and 1st year Spring graduation ceremonies and through letters posted home, but it is certainly an area where stronger supports could be put into place as the LEAP programme continues. While this was an issue in the programme which was not fully resolved within the programme, other problems and shortcomings of the programme were successfully tackled through the action research methodology underpinning the study.

#### 6.5.4 Action Research

The action research approach taken by this study brought with it an emphasis on collaboratively building the LEAP programme with stakeholders, and this collaborative approach was reflected in the changes made to the programme over the course of this study. It is worth noting, however, that not all feedback could be acted upon due to the material realities of the programme's available resources. Many of the suggestions made by students and their parents have already been discussed in this chapter, especially the possibility of offering more choices each term and more classes overall. Unfortunately, putting on more classes each term was not financially possible within this study. The limits of implementable change are one of the largest issues with an action research approach- no matter how collaboratively and reflectively you approach programme design there are hard boundaries which force certain developments and prevent others. Yet even with the hard constraints of available resources, there are ways to get the most out of what you have. The available courses to choose from in the final March term of the third cycle were doubled by mixing the incoming 6th class students with the continuing 1st year students and offering everyone the same classes. While I had initially worried that the age gap between the two cohorts might cause issues, no issues arose and student feedback at the end of the course was positive.

The biggest change which was made over the course of the programme was the decision to centre the LEAP programme around discrete single-subject terms as a result of feedback on the workshop-based Autumn term of the first cycle. The recurring calls for more class time in each module were also followed as much as possible, resulting in the number of contact hours per term increasing from twelve in the Spring term of the first cycle to twenty in the Spring term of the third cycle. By far the greatest number of responses to questions about changes to programme, however, were coded under "None" or "Don't

Know”. I believe that these responses were, in large part, the result of a high level of satisfaction with the programme among students and parents.

Perhaps even more important to this study than the practical use of action research to improve the LEAP programme was the methodological impact of the action research approach. The critical stance enshrined in the form of action research used in this study in conjunction with the reflective practice central to action research in general created the space for me to question certain underlying assumptions of the field which are often taken for-granted. In particular, the research philosophy underpinning this study demanded that questions of identification and provision were evaluated from a sociopolitical standpoint and even on moral and ethical grounds as well as on their technical merits. Unfortunately but perhaps fittingly, the critical examination of my practice and the wider field has left me with more questions than answers, questions which will be laid out in the Directions for Future Research section of the next chapter. Fortunately, action research also provides the tools through which to tackle these questions in turn in order to continue improving the LEAP programme and building useful knowledge grounded in concrete practice. The aims of this research project have been met through the creation of the LEAP programme and the exploration of student experiences on it, leaving both the programme and this study’s findings as a foundation on which to build further action and further research. The findings within the Love of Learning theme are an excellent example of such a solid foundation—one which tells us a lot about students’ experiences of education but leaves us asking more.

## 6.6 Love of Learning

Students’ love of learning was something which shone through the data collected in this study. Throughout their experiences on the LEAP programme and in their wider experiences of education, students were enthusiastic to learn and valued learning for its own sake as well as its instrumental benefits. That a large number of high ability students love learning is not, of course, a unique finding of this study but something which has been observed in previous research and which features heavily in many attempts to theorise high ability. From Winner’s (1996) ‘rage to master’ to Csikszentmihalyi’s (1996) state of ‘Flow’, there are a plethora of attempts to explain high ability students’ love of learning, many of which ultimately restate a common sense circular association: high ability students like learning because they are good at it, and they are good at learning because they like it. This study’s specific findings around students’ favourite subjects (see section

5.2.2.1) reinforce this association between students' positive sentiments towards a specific field and positive perceptions of their competence in the field. Such feedback loops are central to Ziegler's (2005) Actiotope model, the theory of high ability which has most influenced this study. The Actiotope model is able to include feedback loops because it conceives of ability not as an inherent trait but as the product of a system, focusing on "excellent actions" as the result of a complex interaction between individuals and their environments.

Central to this interaction are an individual's goals, the concrete operationalisation of motivation within the Actiotope model. Ziegler (2005, p. 425) emphasises the need for specific learning goals rather than a general motivation to learn, perhaps because of his focus on elite talent development. Students on the LEAP programme expressing their love of learning were, mostly, doing so in a way which painted it as a general motivation rather than a specific goal, something which I would argue reflects the sentiments of many young high ability students who have not yet advanced far enough in a domain to set themselves concrete learning goals, or who have not yet even chosen the domain in which they will develop. Ziegler (2005, p. 425) does obliquely acknowledge this, referring to such general motivation through the prism of goals:

"Persons who are goal oriented with regard to learning attempt to expand on their competencies, to learn new things, and to understand new concepts. Persons who are goal oriented with regard to performance, in contrast, want to make a display of their successes and to conceal their failures. There are notable indications that a goal orientation toward learning is more advantageous to the learning process."

The wider motivation literature to which Ziegler is referring further emphasises the value of intrinsic motivation when it comes to learning (see, for example, Lepper & Henderlong, 2000 or Cerasoli, Nicklin & Ford, 2014), while making it clear that intrinsic motivation is never determined entirely by the individual themselves. Dweck's (2006) work in particular approaches motivation as something which is influenced by the student's interaction with the environment, framing it as something which is not inherent to the student but situated within a systemic context- a clear parallel to the conception of high ability underpinning this study. Dweck's (2006) work on the growth mindset draws particular attention to the power of children's interactions with significant adults like teachers and parents to shape their motivation, an impact which indirectly affects motivation through the mediating

factor of whether the child attributes success and failure to effort or to innate ability. While the growth mindset is closer to capturing the significance of Love of Learning than the Actiotope model's 'goals', it is still focussed on a different aspect of motivation- its object is students' self-concept and even their underlying ontological conception of human ability rather than their sentiments towards learning itself.

One approach which does theorise the underlying phenomenon captured by Love of Learning is Expectancy-Value Theory (Eccles et al., 1983; Wigfield & Eccles, 2000), and particularly its treatment of "values". Eccles et al. (1983) summarise task value as a function of four distinct components: interest (enjoyment of the activity), attainment value (importance of doing well on the task for confirming aspects of one's self-schema), utility value/ importance (importance of task for future goals), and cost (negative aspects of engaging in task). Love of Learning as a theme appears to be mainly rooted in interest, but the responses within the University sub-theme show that students also attach an importance value (especially within the Education for Itself code) as well as a utility value (most notably in the Career or Income code) to their further learning. In their overview of the field of achievement motivation, Wigfield, Eccles et al. (2015, p. 8) state that "consistently, children's expectancies and values have been shown to predict their performance and choice on different activities; values often predict intentions and choice more strongly than performance." These values offer an interesting perspective on the issues surrounding long-term engagement and identification measures discussed under the Programme Design theme. A construct even more closely aligned with Love of Learning is passion, defined by Vallerand, Houliort and Fores (2003, p. 175) as "a strong inclination and desire toward an activity that people like, that they find important, and in which they invest time and energy". In other words, passion is a construct describing the high value (in the EVT sense of the word) an individual places on something.

A study by Fredricks, Alfeld, and Eccles (2010) suggested that passion towards non-academic fields was much more evident among US high school and university students talented in these fields than passion towards learning was among students who had been identified as gifted in elementary school. Wigfield, Eccles et al. (2015) point to a general decline in positive motivation across most constructs used to operationalise motivation as students get older and progress through the school system, though they note that different constructs have different trajectories, and that the change in individual constructs varies differently between students.

In light of this, it is interesting that the students involved in the LEAP programme expressed their passion for learning throughout the programme, as well as in the questionnaires completed when they had progressed to the secondary school programme. Unfortunately, there is nothing in the literature to directly compare this to either in an Irish context, or in a wider context as high ability students from socioeconomically disadvantaged backgrounds. A forthcoming report from CTYI and the Centre for Gifted Education at the College of William & Mary (Cross & Vaughan, 2019) does present information from a slightly different perspective. Quantitative responses (scale data) were sought from students to the statement “I am more serious about learning than other students”. They found that CTYI students were statistically significantly more likely to agree with the statement than CAT students, but that the effect size was small and the variability among CAT students was higher than that among CTYI students (Cross & Vaughan, 2019) . While these are interesting insights, and quantitative data will be vital to understanding love of learning more widely, they give much less insight into what learning actually means to students than the qualitative data used for this study.

Love of Learning in this study, therefore, highlights the importance of considering passion within research and practice, but cannot contextualise this passion beyond its expression by the participants in this programme. We cannot, unfortunately, get a sense of whether the findings captured by the Love of Learning theme are unique to this cohort- either as participants in the programme, or as high ability students, as compared to other students attending DEIS schools or Irish students in general. We will return to the subject of passion in the recommendations section of the next chapter as I feel it is an area currently lacking a solid research base even as the idea of passion deeply informs educational practice in Ireland and elsewhere. Within the context of the Love of Learning theme, passion is clearly a construct which must be incorporated into the Actiotope model for it to be appropriate to programmes like the LEAP programme which focus on high ability students from socioeconomically disadvantaged backgrounds rather than on absolute elite performers.

As well as students’ expression of their love of learning, the Love of Learning theme included salient negative sentiments students expressed towards learning, mostly in a school context. The Negative Pressure and Negative Homework codes capture elements of school life which are largely absent from the LEAP programme, elements which Deci & Ryan (2002) link to increases in anxiety as students progress through the school system,

facing more testing at each stage. Fredricks, Alfeld and Eccles (2010, p. 26) note that in their study of 17-21 year old American students, “many of the youth were more interested in school when they were younger”. They suggest that this loss of passion might be linked to both the increased intensity of assessment as students moved on to middle and then high school and also to social pressures as students got older and peer group priorities changed. Participating in a programme free of pressurised evaluation alongside other students who share a love of learning may therefore help to sustain students’ passion throughout their time in secondary school and beyond. Love of learning remained high among participating students throughout their time on the programme, even becoming more specialised over the four terms of the LEAP programme. Passion for learning is something so strongly associated with high ability students that we risk taking it for granted in creating programmes for them, especially given the utilitarian emphasis much of the literature (and indeed much of wider society) puts on the more tangible, quantifiable results of such programmes. Love of learning is more difficult to pin down and correlate with eventual outcomes, but I believe the significance attached to it by the participants in this research shows that it is valuable in and of itself.

As well as maintaining passion which may otherwise wane as students enter their teenage years, the Love of Learning theme points to how passion can be refined- narrowed from a general love of learning to a specific interest in particular domains. Wigfield et al. (2015, p. 10) outline a general schema for the evolution of interests as children develop:

“At the next stage (Ages 9–13), the emerging self-concept is assumed to be linked more directly to social group affiliation and cognitive ability, leading to occupational interests consistent with one’s social class and ability self-concepts. The final stage (occurring after Age 13 or 14) is characterized by an orientation to the internal, unique self leading to more differentiated and individualized vocational interests, based on abstract concepts of self (e.g., of personality). Thus, the development of vocational interests is a process of continuous elimination of interests that do not fit the self-concepts of one’s gender, social group affiliation, ability, and personal identity (Eccles, 2009, quoted in Wigfield et al., 2015).”

In other words, the LEAP programme takes place at a key stage in students’ lives, a point at which their focus narrows and they begin to invest more time in particular domains. Although Eccles (2009) does not frame this narrowing process in explicitly systemic terms, it is clear that it is influenced by both students’ sense of their own abilities and likes and by

their wider environment- that it is, in other words, a function of the entire system in which children develop. Equally, although this process has not yet been considered as an aspect of a student's Actiotope, it is clear that student interest is fundamental to those later stages of explicit talent development which have been explored in detail in the Actiotope literature. Considering the Love of Learning findings from this study through the lens of student interest development as discussed by Eccles (2009) as well as through the Actiotope model, I believe that the LEAP programme has been useful for students as a way of encouraging the interest development which is a prerequisite for excellent actions in a domain. Most obviously, by providing students with a range of courses, the programme allows for a more informed development of interests and a greater likelihood of students finding their passion. While the LEAP programme's broad range of classes mean that students are not capable of the same level of excellent action in any particular domain as they would be if the focus was on one subject, I would argue that it instead renders them capable of being capable of excellent actions across a number of different domains.

Such a reframing of the Actiotope model has obvious implications for the first discussion sub-question. The goal, or at least a goal, of a high ability programme, the findings from the Love of Learning theme suggest, is to nurture students' passion for learning. For students aged 11-13 and making the transition from primary to secondary school, this passion is likely to still be general for many students, and the programme should aim to both sustain this passion and give students the experiences and tools to refine it.

Incorporation of assessment should be considered very carefully- while the direction and extrinsic motivation provided by the process of evaluation might bring gains in student attainment, it could also lead to a decline in student passion, something which may be equally important in the long run. Creating a course which is sufficiently rigorous while also inspiring rather than diminishing students' love of learning is, of course, no mean feat, but the findings from the Love of Learning theme illustrate how vital passion is and emphasise the need to strive for that balance.

## 6.7 Conclusion

This chapter has considered the findings of this study in terms of both the original research questions which drove the project and the more abstract discussion questions which sought to situate the findings in the wider field of high ability education. While the findings themselves are too bound up in their context to be straightforwardly generalisable, they



nonetheless contain knowledge which may be productively translated into other contexts. Indeed, it might be more worthwhile to reframe the master discussion question from “what *should* a programme for high ability students from socioeconomically disadvantaged backgrounds look like?” to “what *can* a programme for high ability students from socioeconomically disadvantaged backgrounds look like?”. The LEAP programme is just one example of what such a programme can look like, and its model of encouraging students’ passion through a sustained commitment to offering them challenging but enjoyable courses as they move from primary to secondary school will not be suitable across all environments. In particular, the approach to identification taken by the programme is somewhat unorthodox, and the lessons I have drawn from it are more unorthodox still. Yet they are utterly rooted in my reflective practice and the findings of this study, informed by literature from the field of high ability studies and convictions from the ethos of action research.

Above all, the depth and breadth of the impact the programme had on participating students across their academic, social and personal lives humbled me. The responsibility we have as educators in deciding who will have access to such an opportunity is one which we must take very seriously, and our ultimate decision demands moral as well as technical justification. Action research is perhaps best conceived of as a framework through which practitioners can work to make sure they are doing well while they are doing good, and I believe that the LEAP programme has achieved this. Action research, however, is not a process with a tidy end- there is no space for complacency or resting on laurels. The next and final chapter will distill the lessons of the LEAP programme and the questions it has left me with into concrete recommendations for future practice and directions for future research, as well as discussing the overall significance of this study and its limitations.

# Chapter 7: Conclusion

## 7.1 Introduction

The chapters so far have explored how and why the LEAP programme came to exist in the form that it did, what this project has found about students' experiences of the programme and what these findings mean in the context of this study. In this final chapter, the key findings will be laid out in bullet point form and the significance of this research will then be discussed in terms of both local context and the wider implications of its findings. Of course, like any research project, this study has limitations, and these limitations will then be outlined and considered in light of the significance of the research. Having established a nuanced view of what this research has found, what these findings mean and how confident we can be of both the findings and this meaning, a number of recommendations for future practice and directions for future research will be outlined.

- Key findings of Impact of Programme
  - Perceived academic benefits from attending the programme mainly focused on how what students learned helped them in school but also in terms of their ability to learn in general.
  - Perceived social benefits from attending the programme included making new friends, learning new social skills and meeting a diverse range of people.
  - Perceived personal benefits from attending the programme included increased confidence and more focused aspiration.
- Key findings of Love of Learning
  - Positive sentiments towards learning were important to students' engagement with the LEAP programme and school, and to their desire to attend university in the future.
  - The LEAP programme stimulated students' love of learning and allowed students to focus on areas of particular interest.
- Key findings of Programme Design
  - The location of the programme on a university campus and the quality of the programme's instructors were highlighted as key positives by students.

- Being nominated to take part by a teacher gave many students a confidence boost.
- The long-term engagement offered by the programme was appreciated by many students.
- Lack of course choice and the time taken up by the programme appeared to be crucial factors in student disengagement.
- While the LEAP helped students with their transition to secondary school, the transition caused issues in working with schools and in keeping students engaged.
- The use of action research in designing the programme allowed certain positive changes to be made after consultation with parents and students, but other desired changes were not possible due to resource constraints.

## 7.2 Significance

I believe that this study has made a significant contribution to both knowledge and practice in the area of provision for high ability students from socioeconomically disadvantaged backgrounds. The LEAP programme is the first such programme situated at the transition from primary to secondary school, as well as one of the first action research projects in the field (previous examples include Healion, 2013). The knowledge generated by this study offers a rich and nuanced account of what students get out of academic enrichment programmes as well as what they bring to them. This knowledge is particularly important in light of the challenges researchers and practitioners have experienced in providing for students from socioeconomically disadvantaged backgrounds. While there has been a huge amount of work focussing on providing for this cohort of students in recent decades (see section 2.4), there is still a long way to go before these students have full and equal access to the educational opportunities they need. Crucially, there is no single answer to the question of how we provide for these students; they are a diverse group with diverse needs shaped by their own individual experiences and desires and by their local contexts. As such, this study enters into the literature an example of a successful programme from which others can draw inspiration and practical lessons to fruitfully apply to their own context.

### 7.2.1 LEAP Programme

Perhaps the most significant result of this study is the LEAP programme itself, which is now in its fourth year and has so far served almost two hundred students. While it is not the first programme to cater to this particular cohort, or even the first within CTYI to do so, it offers students a deeper engagement than pre-existing CTYI programmes. Crucially, it offers this engagement to a group of students rather than to individuals, spreading the benefits wider across the DEIS schools linked to DCU. It also offers a bridge between the CAA programme for primary school students and the Aiming High Scheme for secondary school students, giving students a chance to attend CTYI programmes without charge or at an extremely subsidised rate from age ten to seventeen. The LEAP programme is therefore pivotal to a profound long-term commitment, one which could truly transform the lives of participants.

The concrete benefits of the programme are in line with findings from elsewhere in the literature about the impact of academic enrichment programmes. Academic, social and personal benefits were reported by students and their parents and teachers. The extent to which students treasured what they learned is something which I believe has not been adequately covered in the literature to date, and the depth of the love of learning expressed by these students is an important addition to the field which demands further investigation. The effects of the long-term engagement which distinguished the LEAP programme from other interventions are also notable. The benefits of taking multiple courses rather than a single term were not simply additive but in some cases compounded by the range of courses students were able to take. The breadth of academic content was enjoyed by students as they took the courses, and also offered them guidance for the future in narrowing their interests and beginning to think about third level. A small number of students spoke of developing metacognitive skills, or learning how to learn as one student put it, and I believe that this was a result of being exposed to different types of learning in different areas over their participation on the course.

The long-term engagement was not, however, taken up by all students. Many students stopped attending the course between terms, though some of these students returned in subsequent terms. While the intensity of the LEAP programme was appreciated by many

students, it seems to have been too much for others. The data collected for this study do not show anything conclusive about disengagement, but they do suggest that course variety plays a significant role in keeping students engaged. From both the formal data collected and my informal interactions with parents, students and school teachers I also believe that greater choice in times and dates for the programme would increase engagement, and that this flexibility is a vital consideration for any extended programme. More research is needed on the subject of engagement and dis-engagement, but this study shows that a sustained commitment to students will be met with a sustained commitment from many but not all of these students and will have real and lasting benefits for them.

### 7.2.2 Transition Programme

The LEAP programme is the first programme for high ability students from socioeconomically disadvantaged backgrounds described in the literature centred on the transition from primary to secondary school, and offers important lessons about the benefits and potential pitfalls of such a structure. The academic benefits were most frequently expressed by students, with the LEAP programme both providing them with a “head start” in school and offering them challenging and interesting material when they felt school was not stimulating them. The benefits of meeting new people and even learning how to make new friends were also framed in terms of the upcoming move to secondary school by some students, suggesting that the programme was good preparation for the social demands of entering a new school. While the LEAP programme thus suggests that structuring academic enrichment programmes around the transition is worthwhile on a number of fronts, this study also observed a number of issues posed by such a structure.

The biggest issue was that it was far more difficult to build and maintain institutional support for the programme across the transition. While both primary and secondary schools were on board with the programme and worked with it, it was difficult to fully engage secondary schools especially for a number of reasons. Firstly, there simply was not as much for them to be involved with- students were identified in primary school and then attended the courses in DCU, meaning that the school’s role was effectively limited to being aware of the students’ attendance and encouraging it where they could. Secondly, issues around sharing data about students were massively complicated by the GDPR rules

brought in during the third cycle of this study, an issue which was not resolved within this study. As well as the institutional gaps, the transition brought other complications to the programme. Students reported spending more time on school, homework and study after entering secondary school, and I believe that this contributed to students' dis-engagement from the programme. While some of these issues were anticipated before the programme was launched, the findings from this study give a clearer image of the unique challenges facing a transition programme for high ability students from socioeconomically disadvantaged backgrounds.

As well as taking place while students moved from primary to secondary school, the LEAP programme formed a pathway for students to move from CTYI's existing primary school programmes for this cohort onto CTYI's secondary school programmes. While this pathway was not availed of by all of the participants on the LEAP programme, those that did move on to the secondary school programme reported positive impacts of the experience. The LEAP programme represents a template for other programmes, either primary or secondary school based, seeking to extend students' engagement. The experiences of students with the Talent Search while on the LEAP programme are also significant, and are a vital part of this study's contribution to identification for high ability programmes in general.

### 7.2.3 Identification

Identification plays a central, perhaps even an outsized, role in the literature on high ability students and across practice in the field. The focus within this study was on inclusion rather than exclusion through identification, with the use of teacher nomination intended to find the most able students in the participating schools rather than to find the students above a particular ability threshold. This decision was based in the criticism of ability measures within the literature, particularly in relation to students from socioeconomically disadvantaged backgrounds (see section 2.4). The use of expanded identification measures for this cohort is reported elsewhere in the literature- Lee, Olszewski-Kubilius & Peternel (2009), for example, used a three-part assessment consisting of nonverbal, maths and reading measures to identify students for Project Excite and accepted students who scored at the 75th percentile or above on any of the three (see section 2.5.1). The LEAP programme adds to the body of literature on high ability students from socioeconomically disadvantaged backgrounds which looks beyond rigid adherence to students' scores on

ability measures. In this case, the students who were identified reported enjoying the programme and benefiting from it. Among those students who went on to sit the Talent Search, this enjoyment and engagement did not seem to vary amongst the three different programmes students qualified for.

The Talent Search offered a different perspective on identification to the initial teacher nomination- it is an ability measure with hard cut-off points for qualification to each of the three CTYI secondary school programmes. Yet, it is crucial to note that the Talent Search ultimately decided *which* programme students qualified for, not whether they qualified for a programme or not. The anxiety students felt about the Talent Search was largely bound up in the fear that they would not be able to continue taking part in programmes if they “failed” the test. Being able to reassure them that this was not the case, and following through on this reassurance by offering places on a programme to all students who sat the Talent Search was, in my opinion, vitally important. While some students were disappointed with their results on the Talent Search, they were still able to attend a high quality summer programme with the scholarship rate. The idea that one score reflects all of a student’s ability and potential is highly problematic, especially when that student is from a socioeconomically disadvantaged background. Yet students’ satisfaction with the level of challenge on their courses during their CTYI secondary school summer programmes, I believe, at least partially justifies their placement on these courses. From a resource perspective, the Talent Search is also justified as *accurate enough*. While the use of other identification measures like portfolios or letters of motivation may improve the accuracy of this placement, they would also take resources away from the provision of programmes. Ultimately, my experiences in running the LEAP programme and conducting this research have convinced me that our efforts as practitioners are better placed in providing more programming for more students than in time-consuming identification measures. This belief, however, is premised on the identification in question being focussed on matching a student to the right programme rather than being used to decide whether a student can take part in a programme or not.

#### 7.2.4 Action Research

The LEAP programme was not the first intervention for high ability students from socioeconomically disadvantaged backgrounds to utilise an action research methodology, but action research remains an unusual approach in the field. In CTYI as an institution,

however, action research is well-established and strongly supported. Healion's (2013) study of the CAA used an action research approach with great success, and was invaluable to this study both for the practical experience it provided and for the support for action research it created within CTYI. Indeed, it is worth considering the research culture of CTYI as an institution in comparison to the wider literature. While there has been a greater emphasis on qualitative methods in research from the last decade, Coleman, Guo & Dabbs' (2007) assertion that quantitative studies make up the bulk of the research on high ability students remains largely true. Perhaps the most obvious, but still under-discussed, reason for CTYI's divergence from the field in general on this front is the influence of individual backgrounds on its institutional *habitus*. The doctoral research produced by CTYI over the past decade has come from people who came to the field of high ability studies through education rather than through psychology, and whose work in the field has always involved both practical provision and theoretical investigation. In the split between psychological approaches and pedagogical or sociological approaches to the field discussed in section 2.2.4, CTYI leans firmly towards the latter. This study adds to the significant body of research from CTYI which comes from that tradition, and taken as a whole this body offers a distinctive view of the field of high ability studies. This view is rooted in students' lived experiences rather than abstract measurements and is particularly concerned with provision for high ability students from socioeconomically disadvantaged backgrounds. I am proud to have contributed to this CTYI tradition partly because I feel it is moving the field in general in the right direction, but mostly because it is a tradition which is not confined to the pages of dissertations or journals but one which emphasises the real world application of the knowledge generated through research.

This study is further confirmation that an action research approach can be used effectively in the design and evaluation of programmes for high ability students from socioeconomically disadvantaged backgrounds. The flexibility which action research gave to the evolution of the LEAP programme was central to its success, especially in relation to the move to a discrete term-based structure for the programme and the expansion from three terms to four and from six two hour classes to eight two and a half hour classes. Beyond this, I would argue that this study also shows explicitly the impact of an action research on programme design through its emphasis on the moral and sociopolitical considerations involved. In drawing attention to these considerations, especially in relation to identification, I hope that this study will convince other researchers and practitioners in the field to approach their work holistically and from a critical stance.



The final feature of the significance of this work is its effectiveness as an action research project in achieving change in the world. Beyond the positive impacts of the programme on participants, I do not know whether the LEAP programme has effected any wider changes. The difficulty in recording or measuring such change was highlighted decades ago by Habermas (1974), and no convincing answers have yet been produced. Ultimately, the question is impossible to answer definitively, but I hope that between the benefits of the programme for students, the further development of the links between CTYI and the schools involved and the new knowledge this study has produced about the LEAP programme and its participants, some positive change has been achieved in the wider community.

### 7.3 Limitations

This study provides a rich and nuanced insight into students' experiences of the LEAP programme, primarily as articulated by the students themselves. The wealth of data collected about the impact of the programme, students' love of learning and some aspects of the programme design reflect the strengths of this approach. The attempt to understand student disengagement from the LEAP programme, however, was less successful. In short, it was not possible to use student responses to understand a phenomenon characterised by the absence of such students. As student dis-engagement was the largest issue facing the programme, this is a serious limitation, both to what the research can confidently say about maintaining student engagement and to my efforts to adapt the LEAP programme to minimise such disengagement. Over the course of the study attempts were made to understand disengagement through reaching out to students who had stopped attending, but no responses were received. I have therefore had to approach the issue of disengagement somewhat obliquely, through looking at what students who stopped attending said prior to disengagement about the programme and to what students who continued attending said about their reasons for doing so. The other findings of this study are all grounded much more straightforwardly in the words of students themselves (and to a lesser extent the words of their parents and school teachers) about the phenomena in question, painting a much clearer picture of these phenomena than of disengagement.

Against this, however, there is a clear picture of continued engagement, data collected from students who continued attending as to why they did so. Students returned term after term because they enjoyed the programme and felt they were benefiting from it on academic, social and personal grounds. Looking back at my researcher diary and at my work over the course of this project, it is clear that understanding and reducing disengagement has been an abiding concern. Incorporating these efforts into the study and the continued development of the LEAP programme has not overcome the issue of disengagement, but it is not an issue that can be addressed adequately within a study of this length. Action research does not aim for a static endpoint, rather it is concerned with a continuing process of reflection and improvement. This process will hopefully continue through future stages of the LEAP programme, which can focus more on creating methods to better study and tackle disengagement than was possible within this study.

The foregrounding of students' own voices in this study generated a wealth of qualitative data on students' perceptions of their experiences on the LEAP programme, but this focus reduced the space for other relevant perspectives. In particular, wider future studies could gather more data from parents of participating students, both about the students and about the parents' own experiences of raising high ability students.

The other limitation affecting this project as research and as practice was the challenge of establishing and maintaining links with students' primary and secondary schools. Again, this reflected the structure of the LEAP programme and its situation at the transition between primary and secondary school, as discussed in section 6.5.3. Overall, I do not believe that stronger links would have profoundly changed the LEAP programme or the findings of this research, but I do think that the teachers' perspectives on the programme would be a productive area for future work on the LEAP programme. Building greater buy-in from teachers, especially in secondary schools, is a process which will continue as the LEAP programme becomes more established and teachers grow more familiar with it. Ways to further this process and other recommendations for future practice will now be outlined.

## 7.4 Recommendations for Future Practice

The findings of this study show that the LEAP programme has been a successful academic enrichment programme, bringing a range of benefits across students' academic, social and personal lives. The first recommendation of this study, therefore, is that the LEAP programme be continued beyond this project, as indeed it has been for the 2019-2020 academic year. Now that it has been established as an effective programme, I believe that expanding it further should be seriously considered. This could be through offering the opportunity to more students from the linked DEIS schools in North Dublin or through incorporating more schools into the programme beyond those linked to the DCU Access service. As well as giving more students the chance to take part, increasing the number of courses available each term to accommodate more students may also have a significant impact on student engagement, as discussed in section 6.5.2. Simply put, the more subjects are available, the greater the likelihood one will really capture students' interests. Of course, such expansion would require a significant increase in funding, funding which CTYI is not currently in a position to provide. On the basis of the findings of this study, I think it is worth considering new sources of funding, be they public (Irish or EU) or philanthropic.

For students who have completed the LEAP programme and are now making their way through secondary school, I would recommend that efforts to inform students and their families about the opportunities available within CTYI are increased. In particular, the students are eligible to participate in the Early University Entrants (EUE) programme during Transition Year with reduced fees. The EUE programme is directly modelled on DCU First-Year modules in courses like Law & Politics and Engineering, and thus offers students an experience which is closer to third-level in academic and logistical terms than the secondary school summer programmes. It also takes place during the academic year, and thus could reach students who are unavailable to attend the summer programme.

As students move further through school and then beyond it, I think that CTYI should endeavor to maintain a link with them. CTYI are currently setting up an alumni organisation- a concerted effort should be made to involve former LEAP students (as well as other students from the DEIS schools linked to DCU). Whatever former LEAP students go on to do as adults, CTYI or the wider alumni network may be able to support them. Access to such social capital is crucial for students from this cohort, many of whom may

not have family or friends with experience of third-level. Students who do go on to third-level should be encouraged to return to CTYI as staff, where they could prove invaluable role models for the next generation of LEAP students.

## 7.5 Directions for Future Research

Maintaining links with former LEAP students throughout secondary school and especially after the finish school should be a priority from a research perspective as well as a practical one. Longitudinal data on students' educational trajectories could explore the impact of attending the LEAP programme and other CTYI courses over the long term. Such research would be an excellent opportunity to deepen our understanding of what participation in the programme means for students, especially if it were a qualitative study which foregrounded students' perception of their own lives.

As well as further research into students' ever longer-term engagement with CTYI, I believe this study highlights the need for deeper investigation of disengagement from the LEAP programme. I cannot see any clear and obvious ways of undertaking this investigation- any approaches which I have thought of I have tried.

Finally, the findings from this study around student experiences of the Talent Search and my own reflections on identification arising from them mark these as areas for future research. I would recommend CTYI run a study focussed expressly on the relationship between students' Talent Search scores and their experience of the LEAP programme and the secondary school programmes. I believe that such a study has the potential to radically reshape our understanding of identification for programmes like the LEAP. If students enjoy the programme and benefit from it regardless of their performance on the Talent Search then I believe this raises deep questions about how we decide who gets to partake in such opportunities. Nominating the most able students may still be the most just way to make that decision, but we should at least then be honest and state that the nomination process is a way of allocating scarce resources rather than a way of finding the only students who are suitable for the programme.

## 7.7 Conclusion

In concluding the conclusion of this study, I think it is important to emphasise that this is not the end of the LEAP programme, only the end of the beginning of the LEAP programme. Over the three cycles explored within this research the LEAP programme has developed considerably based on the expressed needs and desires of participants and my own improving practice. Much like the participating students, it must now undergo its own transition from the fledgling focus of this research to a mature and established feature of CTYI's provision for high ability students from socioeconomically disadvantaged backgrounds. In doing so, it is well placed between the CAA primary school programme and the Aiming High secondary scheme, but it also stands alone as a unique opportunity within an Irish context in terms of the depth of commitment it offers students, entirely free of charge. Unsurprisingly therefore, the LEAP programme is the result of a significant level of investment by CTYI, in terms of the time and energy as well as the funding dedicated to it. This concerted focus and serious investment is, I am convinced, necessary if we as educators are to live up to the ideals of justice, equality and emancipation enshrined in action research, but by no means exclusive to it. Of course, these lofty ideals have not been achieved within the course of this project, but I do believe that they have been furthered by it.

I believe this on the basis of the research which has been tied into the action from the very beginning. While the LEAP programme will continue, this is the end for this particular study of it. The study has provided nuanced answers to the research questions it was based on, and it has done so above all by taking students' words seriously, for the methodological and philosophical reasons discussed in Chapter 4. It created new knowledge across each of the three themes explored in Chapter 5, and this knowledge was built into theory through examining it dialectically with the literature in Chapter 6. The research has also generated thought-provoking questions to serve as the basis for future research. This future research will go in different directions and focus on different aspects of the LEAP programme, but it will build on this study to do so. This is an appropriate note on which to conclude the conclusion to the conclusion of this action research project- the cycle of knowledge construction continues onwards and upwards, and this study now joins that cycle.



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# Appendix A- Research Ethics Forms

## Ethical Approval from Dublin City University

Ollscoil Chathair Bhaile Átha Cliath  
Dublin City University



Mr Eamonn Carroll  
Centre for Talented Youth, Ireland (CTYI)

13<sup>th</sup> September 2019

**REC Reference:** DCUREC/2019\_146

**Proposal Title:** Perceived academic and social effects of a multi-term academic enrichment programme for high ability students transitioning from DEIS primary schools to DEIS secondary schools

**Applicant(s)** Mr Eamonn Carroll, Dr Colm O'Reilly and Professor Joe O'Hara

Dear Colleagues,

Further to expedited review, the DCU Research Ethics Committee approves this research proposal.

Materials used to recruit participants should note that ethical approval for this project has been obtained from the Dublin City University Research Ethics Committee.

Should substantial modifications to the research protocol be required at a later stage, a further amendment submission should be made to the REC.

Yours sincerely,

A handwritten signature in black ink that reads 'Mark Philbin'.

**Dr Mark Philbin**  
Interim Chairperson  
DCU Research Ethics Committee



Taighde & Nuálaíocht Tacaíocht  
Ollscoil Chathair Bhaile Átha Cliath,  
Baile Átha Cliath, Éire

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## **Student Plain Language Statement**

Dear Students,

This research is being carried out by Mr. Eamonn Carroll as part of a PhD thesis with the Irish Centre for Talented Youth (CTYI) and the Institute of Education at Dublin City University. It is being conducted under the supervision of Dr. Colm O' Reilly (Director of the Irish Centre for Talented Youth) and Prof. Joe O'Hara (School of Policy and Practice, Dublin City University). The project is being funded by CTYI.

The study aims to gain an understanding of the perceived academic and social effects of attending the LEAP programme in DCU. In particular, the research hopes to see if and to what extent taking part in the LEAP programme affects a students' academic and social development, and their perceptions of school.

Upon completion, this research hopes to bring greater attention to the potential of students when given the opportunity and time to develop their interests in academic university-based programmes. This research also hopes to establish what changes can be made to the LEAP programme to maximise its effectiveness in catering to the needs of those who take part in the programmes.

The research shall involve the completion of two questionnaires and the possibility of a focus group with other LEAP participants. All focus groups will be audio-taped. The focus groups should take no longer than thirty minutes. All questionnaires and focus groups shall be completed on the DCU campus.

All the information that is gathered as part of this study will be treated as highly confidential, and no names will be used in any form in the published research. All the research data gathered will be locked securely in an office at DCU at all times and only the researcher will have access to this information. All information will be kept entirely confidential, within the limits of the law- this means serious concerns over a student's wellbeing based on something they say within this study will be reported according to the CTYI Child Protection Policy.

Please be advised that participation in the research study is completely voluntary and any participant may withdraw from the study at any point and for any reason without facing any penalties or negative effects in taking part in the LEAP programme or taking further courses with CTYI or at Dublin City University.

Personal data to be collected for this research include student names, ages and opinions on a variety of questions related to the LEAP programme. These data are being collected in order to achieve the research aims outlined above. The data controller for the programme will be Mr. Eamonn Carroll, the lead researcher. The DCU Data Protection Officer – Mr. Martin Ward (data.protection@dcu.ie Ph: 7005118 / 7008257) can be contacted with any

questions about DCU's data protection policies. Participants may withdraw their consent for their data to be held at any time by contacting Mr. Eamonn Carroll. They may also ask for any data relating to them to be shared with them at any time by contacting Mr. Eamonn Carroll. After three years all data will be securely disposed of.

If participants wish to see the research based on this study when it is completed they can email [Eamonn.Carroll39@mail.dcu.ie](mailto:Eamonn.Carroll39@mail.dcu.ie).

If you have any further questions regarding the research, feel free to contact me at any time on (01) 700 7031 or email: [Eamonn.Carroll39@mail.dcu.ie](mailto:Eamonn.Carroll39@mail.dcu.ie)

If participants have concerns about this study and wish to contact an independent person, please contact:

The Secretary, Dublin City University Research Ethics Committee, c/o Office of the Vice President for Research, Dublin City University, Dublin 9. Tel 01-7008000

## Parent Plain Language Statement

Dear Parents,

This research is being carried out by Mr. Eamonn Carroll as part of a PhD thesis with the Irish Centre for Talented Youth (CTYI) and the Institute of Education at Dublin City University. It is being conducted under the supervision of Dr. Colm O' Reilly (Director of the Irish Centre for Talented Youth) and Prof. Joe O' Hara (School of Policy and Practice, Dublin City University). The project is being funded by CTYI.

The study aims to gain an understanding of the perceived academic and social effects of attending the LEAP programme in DCU. In particular, the research hopes to see if and to what extent taking part in the LEAP programme affects a students' academic and social development, and their perceptions of school.

Upon completion, this research hopes to bring greater attention to the potential of students when given the opportunity and time to develop their interests in academic university-based programmes. This research also hopes to establish what changes can be made to the LEAP programme to maximise its effectiveness in catering to the needs of those who take part in the programmes.

The research shall involve a group interview with the parents of other LEAP participants. All group interviews will be audio-taped. The group interviews should take no longer than thirty minutes. All group interviews shall be completed on the DCU campus.

All the information that is gathered as part of this study will be treated as highly confidential, and no names will be used in any form in the published research. All the research data gathered will be locked securely in an office at DCU at all times and only the researcher will have access to this information. All information will be kept entirely confidential, within the limits of the law- this means serious concerns over a student's wellbeing based on something said within this study will be reported according to the CTYI Child Protection Policy.

Please be advised that participation in the research study is completely voluntary and any participant may withdraw from the study at any point and for any reason without facing any penalties or negative effects for them or their children in taking part in the LEAP programme or taking further courses with CTYI or at Dublin City University.

Personal data to be collected for this research include opinions on a variety of questions related to the LEAP programme. These data are being collected in order to achieve the research aims outlined above. The data controller for the programme will be Mr. Eamonn Carroll, the lead researcher. The DCU Data Protection Officer – Mr. Martin Ward (data.protection@dcu.ie Ph: 7005118 / 7008257) can be contacted with any questions about DCU's data protection policies.

Participants may withdraw their consent for their data to be held at any time by contacting Mr. Eamonn Carroll. They may also ask for any data relating to them to be shared with them at any time by contacting Mr. Eamonn Carroll. After three years all data will be securely disposed of.

If participants wish to see the research based on this study when it is completed they can email [Eamonn.Carroll39@mail.dcu.ie](mailto:Eamonn.Carroll39@mail.dcu.ie).

If you have any further questions regarding the research, feel free to contact me at any time on (01) 700 7031 or email: [Eamonn.Carroll39@mail.dcu.ie](mailto:Eamonn.Carroll39@mail.dcu.ie)

If participants have concerns about this study and wish to contact an independent person, please contact:

The Secretary, Dublin City University Research Ethics Committee, c/o Office of the Vice President for Research, Dublin City University, Dublin 9. Tel 01-7008000

## Student Informed Assent Form

Dear Student,

As a participant in the LEAP programme, you are being invited to take part in research aimed at gaining an understanding of the academic and social effects of taking part in the LEAP programme. This research is being carried out by Mr. Eamonn Carroll as part of a PhD thesis with the Irish Centre for Talented Youth (CTYI) and the Institute of Education at Dublin City University. The study is being conducted under the supervision of Dr. Colm O' Reilly (Director of the Irish Centre for Talented Youth) and Prof. Joe O' Hara (School of Policy and Practice in Dublin City University).

Please complete the following (Circle Yes or No for each question)

Have you read or had read to you the Plain Language Statement Yes/No

Do you understand the information provided? Yes/No

Have you had an opportunity to ask questions and discuss this study? Yes/No

Have you received satisfactory answers to all your questions? Yes/No

Are you aware that if you take part in a focus group it will be audiotaped? Yes/No

Please note that participation in the research study is completely voluntary and that you may withdraw from the study at any point without facing any penalties with the LEAP programme, CTYI or at DCU.

All research materials shall be kept in a secure locked facility at the CTYI offices in Dublin City University with the data collected being destroyed three years after the research publication date. All information that is gathered as part of this study will be treated as highly confidential, and no names will be used in any form of the published research.

If you agree to take part in the research, please complete the below:

I have read and understood the information in this form. My questions and concerns have been answered by the researchers, and I have a copy of this consent form. Therefore, I consent to take part in this research project.

Participant's signature \_\_\_\_\_

Participant's name in block capitals \_\_\_\_\_

(Please note that parental consent must be gained prior to taking part in the research)

Parent(s)/ Guardian(s) name \_\_\_\_\_

Parent(s)/ Guardian(s) signature \_\_\_\_\_

Date \_\_\_\_\_

## Parent Informed Consent Form

Dear Parent,

As the parent of a participant in the LEAP programme, you are being invited to take part in research aimed at gaining an understanding of the academic and social effects of taking part in the LEAP programme.

This research is being carried out by Mr. Eamonn Carroll as part of a PhD thesis with the Irish Centre for Talented Youth (CTYI) and the Institute of Education at Dublin City University. The study is being conducted under the supervision of Dr. Colm O' Reilly (Director of the Irish Centre for Talented Youth) and Prof. Joe O' Hara (School of Policy and Practice in Dublin City University).

Please complete the following (Circle Yes or No for each question)

Have you read or had read to you the Plain Language Statement Yes/No

Do you understand the information provided? Yes/No

Have you had an opportunity to ask questions and discuss this study? Yes/No

Have you received satisfactory answers to all your questions? Yes/No

Are you aware that if you take part in a group interview it will be audiotaped? Yes/No

Please note that participation in the research study is completely voluntary and that you may withdraw from the study at any point without you or your child facing any penalties with the LEAP programme, CTYI or at DCU.

All research materials shall be kept in a secure locked facility at the CTYI offices in Dublin City University with the data collected being destroyed three years after the research publication date. All information that is gathered as part of this study will be treated as highly confidential, and no names will be used in any form of the published research.

If you agree to take part in the research, please complete the below:

I have read and understood the information in this form. My questions and concerns have been answered by the researchers, and I have a copy of this consent form. Therefore, I consent to take part in this research project.

Participant's (Parent) signature \_\_\_\_\_

Participant's (Parent) name in block capitals \_\_\_\_\_

Date \_\_\_\_\_



## Appendix B- Programme Attendance by Student

Student	Spring 6th Class	July	Autumn	Spring 1st Year
S01		Y	Y	Y
S02		Y		
S03		Y		
S04		Y	Y	Y
S05		Y		
S06				
S07				
S08		Y	Y	Y
S09		Y	Y	Y
S10		Y		
S11		Y		Y
S12		Y		
S13		Y		Y
S14		Y		
S15		Y	Y	Y
S16		Y	Y	Y
S17				
S18		Y		
S19		Y		
S20				
S21		Y	Y	Y
S22		Y		
S23		Y		Y
S24				
S25		Y	Y	Y
S26		Y		Y
S27		Y		Y
S28		Y	Y	Y
S29		Y		Y
S30		Y	Y	Y

S31		Y		Y
S101	Y		Y	Y
S102	Y	Y	Y	Y
S103	Y		Y	
S104	Y			
S105	Y	Y		
S106	Y		Y	Y
S107	Y		Y	Y
S108	Y			
S109	Y			
S110	Y		Y	Y
S111	Y	Y	Y	Y
S112	Y	Y	Y	
S113	Y		Y	Y
S114	Y			
S115	Y	Y	Y	Y
S116	Y	Y	Y	Y
S117	Y	Y		
S118	Y	Y	Y	Y
S119	Y		Y	Y
S120	Y			
S121	Y		Y	Y
S122	Y		Y	Y
S123			Y	Y
S124	Y		Y	
S125	Y		Y	Y
S126	Y	Y	Y	Y
S127	Y		Y	
S128	Y		Y	
S129	Y		Y	Y
S130	Y		Y	Y
S131	Y	Y	Y	Y
S132	Y	Y	Y	
S133	Y		Y	
S134	Y		Y	
S135	Y			

S136	Y			
S137	Y		Y	
S138	Y			
S139	Y	Y	Y	
S140	Y			
S141	Y	Y		
S142	Y		Y	
S143	Y			
S144	Y	Y		
S145	Y	Y	Y	
S146				
S147	Y			
S148	Y		Y	Y
S149	Y			
S150	Y			
S151	Y			
S152	Y		Y	
S153	Y	Y	Y	Y
S154	Y	Y	Y	Y
S155	Y	Y	Y	Y
S156				
S157		Y	Y	Y
S158				
S159				
S160				
S161		Y		
S162				
S163		Y	Y	Y
S164				
S165		Y		
S166		Y	Y	Y
S167			Y	
S168				
S169				
S170				
S171		Y	Y	Y

S172				
S173				
S174		Y		
S175		Y	Y	Y
S176		Y		
S177				
S178				
S179		Y	Y	
S180		Y	Y	Y
S181		Y	Y	Y
S182		Y	Y	Y
S183			Y	
S184				
S185				
S186				
S187		Y	Y	Y
S188		Y	Y	Y
S189		Y	Y	Y
S190				
S191		Y		
S201	Y			
S202	Y		Y	Y
S203	Y	Y	Y	Y
S204	Y			
S205	Y			
S206			Y	Y
S207	Y			
S208	Y	Y	Y	Y
S209	Y			
S210	Y			
S211	Y			Y
S212	Y	Y	Y	
S213	Y		Y	
S214	Y		Y	
S215	Y			
S216	Y			

S217	Y			
S218	Y			Y
S219	Y	Y	Y	Y
S220	Y			
S221	Y	Y	Y	Y
S222		Y		
S223	Y			
S224	Y			
S225	Y	Y	Y	Y
S226	Y			
S227	Y			
S228	Y		Y	Y
S229	Y			
S230	Y			Y
S231	Y	Y	Y	
S232	Y			
S233	Y			
S234	Y			
S235			Y	Y
S236	Y		Y	Y
S237	Y		Y	Y
S238	Y	Y	Y	
S239	Y			
S240			Y	
S241	Y			
S242	Y			
S243	Y			Y

# Appendix C- Data Collection Instruments

## July 2016 (Cycle 1) Initial Student Questionnaire

Your Name: \_\_\_\_\_

Your Age: \_\_\_\_\_

What career would you like to do when you grow up?

\_\_\_\_\_

Have you taken part in a DCU CAA programme before?

**Yes**

**No**

Did you enjoy the previous CAA course you took?

**Very much**

**It was ok**

**Not that much**

What did you like or not like about it?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Do you enjoy school?

**Yes, I love it!**

**Yes, a little**

**Not really**

**Not at all!**

What do you like or not like about it?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Are you looking forward to going into secondary school?

**Yes, I can't wait!**

**Yes, a little**

**Not really**

**Not at all!**

What are you looking forward to or what are you not looking forward to?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Which three words best describe how you feel about secondary school?

\_\_\_\_\_

What are you most looking forward to in secondary school?

\_\_\_\_\_

\_\_\_\_\_

What are you most worried about in secondary school?

\_\_\_\_\_

\_\_\_\_\_

Are you looking forward to this course at DCU?

**Yes, I can't wait!**

**Yes, a little**

**Not really**

**Not at all!**

What are you most hoping to do during this course? What would you like to learn?

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---

Would you like to go to university?

**Yes**

**No**

Why/Why not?

---

---

---

If you go to university, what would you like to study there?

---

**July 2016 (Cycle 1) End Student Questionnaire**

Your Name: \_\_\_\_\_

Your Age: \_\_\_\_\_

Did you enjoy this course?

**Very much**

**It was ok**

**Not that much**

Why/Why not?

---

---

---

What have you learned from this course?

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---

---

Are you looking forward to the rest of the LEAP Programme?

**Yes**

**No**

Why/Why not?

---

---

---

Is there anything you would change about this course?

---

---

---

Which secondary school are you going to in September?

---

Why did you choose this school?

---

---

---

Would you like to go to university?

**Yes**

**No**

If so, what would you like to study there?

---



**Autumn 2016 (Cycle 1) Student Questionnaire**

Your Name: \_\_\_\_\_

Your Secondary School: \_\_\_\_\_

Do you enjoy school?

**Yes, I love it!**                      **Yes, a little**                      **Not really**                      **Not at all!**

What do you like or not like about it?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Which three words best describe how you feel about school?

\_\_\_\_\_                      \_\_\_\_\_                      \_\_\_\_\_

Complete these sentences:

When I play games, the most important thing is \_\_\_\_\_

Winning every time you play is \_\_\_\_\_

Having fun while playing games is \_\_\_\_\_

People win games because they \_\_\_\_\_

Do you play games at school?

**Yes, loads!**                                      **Yes, a little**                                      **Not really**                                      **Not at all!**

What kind of games?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Do you enjoy playing these games?

**Yes, I love it!**                      **Yes, a little**                      **Not really**                      **Not at all!**

Do you feel like you learn from these games?

**Yes, loads!**                                      **Yes, a little**                                      **Not really**                                      **Not at all!**

What do you learn from them?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Do you think more games should be played in school?

**Yes**                                      **No**                                      **Not sure**

Why/Why not?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Do you play games outside of school?

**Yes, loads!**                                      **Yes, a little**                                      **Not really**                                      **Not at all!**

What kind of games?

---

---

---

Do you enjoy playing these games?

**Yes, I love it!**                      **Yes, a little**                      **Not really**                      **Not at all!**

Do you feel like you learn from these games?

**Yes, loads!**                                      **Yes, a little**                                      **Not really**                                      **Not at all!**

What do you learn from them?

---

---

---

**Spring 2017 (Cycle 1) Initial Student Questionnaire**

Your Name: \_\_\_\_\_

Your Secondary School: \_\_\_\_\_

Are you enjoying the LEAP Programme?

**Yes, I love it!**

**Yes, a little**

**Not really**

**Not at all!**

Why/Why not?

---

---

---

What, if anything, have you gotten out of it so far?

---

---

---

Are you looking forward to this class?

**Very much**

**Sort of**

**Not that much**

Why/Why not?

---

---

---

Are you planning on attending the summer programme?

**Yes**

**No**

Are you looking forward to the summer programme?

**Very much**

**Sort of**

**Not that much**

Why/Why not?

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Have you been encouraged by anyone to continue coming to the programme? (Parents, family, teachers, friends, others) How?

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---

---

Have you told your school that you are on this programme?

**Yes**

**No**

Why/Why not?

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---

---

How did you find the Talent Search assessment?

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---

---

Did you feel prepared for it?

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---

---

Which three words best describe how you feel about school?

---

What's the best bit about secondary school?

---

---

---

What's the worst bit about secondary school?

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---

Are you finding secondary school difficult?

---

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---

Has the LEAP programme made any difference to your experience in school?

**Yes**

**No**

In what ways? / Why not?

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**Spring 2017 (Cycle 1) End Student Questionnaire**

Your Name: \_\_\_\_\_

Your Secondary School: \_\_\_\_\_

Have you enjoyed the LEAP Programme?

**Yes, I love it!**

**Yes, a little**

**Not really**

**Not at all!**

Why/Why not?

---

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---

What, if anything, have you gotten out of it so far?

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---

---

Did you enjoy this class?

**Very much**

**Sort of**

**Not that much**

Why/Why not?

---

---

---

Are you planning on attending the summer programme?

**Yes**

**No**

Are you looking forward to the summer programme?

**Very much**

**Sort of**

**Not that much**

Why/Why not?

---

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---

Which three words best describe how you feel about school?

---

---

---

How does the LEAP Programme compare to school?

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---

---

Has the LEAP programme made any difference to your experience in school?

**Yes**

**No**

In what ways? / Why not?

---

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---

What changes would you make to the LEAP Programme?

---

---

---

Would you like to go to university?

**Yes**

**No**

Why/Why not?

---

---

---

If so, what would you like to study there?

---

**Spring 2017 (Cycle 2) Initial Student Questionnaire**

Your Name: \_\_\_\_\_

Your Age: \_\_\_\_\_

What's your dream job?

\_\_\_\_\_

Have you taken part in a DCU CAA programme before?

**Yes**

**No**

Did you enjoy the previous CAA course you took?

**Very much**

**It was ok**

**Not that much**

What did you like or not like about it?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Do you enjoy school?

**Yes, I love it!**

**Yes, a little**

**Not really**

**Not at all!**

What do you like or not like about it?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Are you looking forward to going into secondary school?

**Yes, I can't wait!**

**Yes, a little**

**Not really**

**Not at all!**

Which three words best describe how you feel about secondary school?

\_\_\_\_\_

What are you most looking forward to in secondary school?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What are you most worried about in secondary school?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What is your favourite subject in school?

\_\_\_\_\_

Why?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Are you looking forward to this course at DCU?

**Yes, I can't wait!**

**Yes, a little**

**Not really**

**Not at all!**

What are you most hoping to do during this course? What would you like to learn?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Have you been encouraged by anyone to do this programme? (Parents, family, teachers, friends, others) How?

\_\_\_\_\_  
\_\_\_\_\_

---

Would you like to go to university?

**Yes**

**No**

Why/Why not?

---

---

---

If you go to university, what would you like to study there?

---



**Spring 2017 (Cycle 2) End Student Questionnaire**

Your Name: \_\_\_\_\_

Your Age: \_\_\_\_\_

Did you enjoy this course?

**Very much**

**It was ok**

**Not that much**

Why/Why not?

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---

What have you learned from this course?

---

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---

Do you want to continue taking part in the LEAP Programme?

**Yes**

**No**

Are you looking forward to the rest of the LEAP Programme?

**Yes**

**No**

Why/Why not?

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---

Is there anything you would change about this course?

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---

---

Which secondary school are you going to in September?

---

Why did you choose this school?

---

---

---

Would you like to go to university?

**Yes**

**No**

Why/Why not?

---

---

---

If so, what would you like to study there?

---

**July 2017 (Cycle 2) Initial Student Questionnaire**

Your Name: \_\_\_\_\_

Your Age: \_\_\_\_\_

What's your dream job?

\_\_\_\_\_

Did you take a LEAP course in January?

**Yes**

**No**

Did you enjoy the LEAP course you took in January?

**Very much**

**It was ok**

**Not that much**

What did you like or not like about it?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Do you enjoy school?

**Yes, I love it!**

**Yes, a little**

**Not really**

**Not at all!**

What do you like or not like about it?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Are you looking forward to going into secondary school?

**Yes, I can't wait!**

**Yes, a little**

**Not really**

**Not at all!**

What are you looking forward to or what are you not looking forward to?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Which three words best describe how you feel about secondary school?

\_\_\_\_\_

What are you most looking forward to in secondary school?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What are you most worried about in secondary school?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What is your favourite subject in school?

\_\_\_\_\_

Why?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What are your favourite things to do outside of school?

\_\_\_\_\_

Are you looking forward to this course at DCU?

**Yes, I can't wait!**

**Yes, a little**

**Not really**

**Not at all!**

What are you most hoping to do during this course? What would you like to learn?

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---

Would you like to go to university?

**Yes**

**No**

Why/Why not?

---

---

---

If you go to university, what would you like to study there?

---

**Autumn 2017 (Cycle 2) Initial Student Questionnaire**

Your Name: \_\_\_\_\_

Your Secondary School: \_\_\_\_\_

Have you taken part in a DCU CAA programme before?

**Yes**

**No**

Do you enjoy school?

**Yes, I love it!**

**Yes, a little**

**Not really**

**Not at all!**

What's your favourite part of school?

\_\_\_\_\_

\_\_\_\_\_

What's your least favourite part of school?

\_\_\_\_\_

\_\_\_\_\_

What's the biggest difference between secondary and primary school?

\_\_\_\_\_

\_\_\_\_\_

Which three words best describe how you feel about school?

\_\_\_\_\_

If you could make any change to your school, what would it be?

\_\_\_\_\_

\_\_\_\_\_

What's your favourite subject in school? Why?

\_\_\_\_\_

\_\_\_\_\_

What do you like to do outside of school?

\_\_\_\_\_

\_\_\_\_\_

Has going into secondary changed what you do outside of school? How?

\_\_\_\_\_

\_\_\_\_\_

Why do you take part in the LEAP programme?

\_\_\_\_\_

\_\_\_\_\_

What would you like to do after you have finished secondary school?

\_\_\_\_\_

Why?

\_\_\_\_\_

\_\_\_\_\_

How will you work towards this future over the next six years?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Autumn 2017 (Cycle 2) End Student Questionnaire**

Your Name: \_\_\_\_\_

Your Secondary School: \_\_\_\_\_

Did you enjoy this course?

**Very much**

**It was ok**

**Not that much**

Why/Why not?

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What have you gotten out this course?

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What was your favourite part of the course? Why?

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Do you want to continue taking part in the LEAP Programme?

**Yes**

**No**

Are you looking forward to the rest of the LEAP Programme?

**Yes**

**No**

Why/Why not?

---

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Is there anything you would change about this course?

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Are there any subjects you would like to do in the final term?

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---

Do you enjoy school?

**Yes, I love it!**

**Yes, a little**

**Not really**

**Not at all!**

What has been the best bit of secondary school so far?

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---

What has been the worst bit of secondary school so far?

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Which three words best describe how you feel about school?

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## **Group Interviews:**

### July 2016 (Cycle 1) Group Interview Guides

#### **1. ADULTS (7TH JULY, 1PM)**

Introductions

##### **A. Questions**

- i. Did your child enjoy the course? Why/which aspects? Have they ever done anything like this before?
- ii. What do you think they have gotten out of it? (Academically & socially/personally)
- iii. Is there anything about the course you would change?
- iv. Do you think your child will keep doing this sort of thing themselves? Do you know of any groups who would facilitate this?
- v. Would your child consider doing something like this in college? Would they like to do something else in college? Has this course changed the way they talk about their plans for later life?
- vi. How does your child feel about going into secondary school? Do you think this course has changed their feelings about school?
- vii. Which secondary school are they going to? How did you choose that one?

#### **2. STUDENTS (8TH JULY, 10AM)**

Introductions

##### **A. Questions**

- i. Did you enjoy the course? Why? Have you ever done anything like this before?
- ii. What do you think you have gotten out of it? (Academically & socially/personally)
- iii. Is there anything about the course you would change?
- iv. Would you do this sort of thing in your free time? Do you know anywhere you could go to do it?
- v. Would you like to do something like this in college? Would you like to go to college/what would you like to do when you grow up? Has this experience changed how you feel about college?
- vi. How do you feel about going into secondary school?

## March 2017 (Cycle 1) Group Interview Guides

### ADULTS (11TH MARCH, 1:35PM)

Introductions

#### B. Questions

- i. Did your child enjoy the LEAP Programme? Why/which aspects? Have they ever done anything like this before?
- ii. What do you think they have gotten out of it? (Academically & socially/personally)
- iii. Is there anything about the programme you would change?
- iv. Do you think your child will keep attending the CTYI summer courses?
  - v. We had a high dropout rate with this programme. Why do you think your child kept attending all the way through?
- vi. Would your child consider doing something like this in college? Would they like to do something else in college? Has this course changed the way they talk about their plans for later life?
- vii. How has your child found the first year of secondary school? Do you think this course has changed their feelings about school?

### CHILDREN (11TH MARCH, 14:00PM)

Introductions

#### C. Questions

- i. Did you enjoy the course? Why? Have you ever done anything like this before?
- ii. What do you think you have gotten out of it? (Academically & socially/personally)
- iii. Is there anything about the course you would change?
- iv. Are you going to attend the CTYI summer course this year? How about after this summer?
  - v. A few other students stopped coming to the programme. Why did you keep attending all the way through?
- vi. Would you like to do something like this in college? Would you like to go to college/what would you like to do when you grow up? Has this experience changed how you feel about college?
- vii. How did you find your first year in secondary school? Did the LEAP help with anything?

## Primary School Teacher Questionnaire 2017 (Cycle 2)

How many students have you nominated for the LEAP programme?

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Why did you choose these students?

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How many of these students have attended previous CAA courses?

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What, if anything, do you think students get out of taking part in LEAP/ CAA courses?

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Do you think students will benefit more from taking multiple classes over the duration of the LEAP programme?

**Yes**

**Somewhat**

**No**

Why/Why not?

---

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---

Do you think the LEAP programme helps students with the transition to secondary school?

**Yes**

**Somewhat**

**No**

Why/ Why not?

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## Primary School Teacher Questionnaire 2018 (Cycle 3)

How many students have you nominated for the LEAP programme?

---

Why did you choose these students?

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---

How many of these students have attended previous CAA courses?

---

What, if anything, do you think students get out of taking part in LEAP/ CAA courses?

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---

Do you think students will benefit more from taking multiple classes over the duration of the LEAP programme?

**Yes**

**Somewhat**

**No**

Why/Why not?

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---

What do you think is the biggest factor in students' choice of whether to continue taking part in classes across multiple terms?

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Did you have any students who attended the first term of the LEAP programme but do not want to attend any further classes?

---

Did these students mention any reasons for their decision to stop attending to you or other teachers?

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---

---

Do you think the LEAP programme helps students with the transition to secondary school?

**Yes**

**Somewhat**

**No**

Why/ Why not?

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## Secondary School Teacher Questionnaire 2017 (Cycle 1)

How many students from your school take part in the LEAP programme?

---

What, if anything, do you think they get out of taking part?

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---

Do you think there are any negative consequences to taking part? Please explain

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---

Do you think taking part in the LEAP programme helps students make the transition to secondary school?

**Yes**

**Somewhat**

**No**

Why/ Why not?

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---

---

---

Did you have any students who attended the LEAP programme in primary school but stopped attending during first year?

---

Did these students mention any reasons for their decision to stop attending to you or other teachers?

---

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---

What do you think are the most important factors influencing students' participation or disengagement in the LEAP programme or CTYI summer programmes?

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## Secondary School Teacher Questionnaire 2018 (Cycle 2)

How many students from your school take part in the LEAP programme?

---

Did you put any other students forward for the Talent Search assessment?

---

Why did you put these students forward?

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---

---

Do you think taking part in the LEAP programme helps students make the transition to secondary school?

**Yes**

**Somewhat**

**No**

Why/ Why not?

---

---

---

---

Did you have any students who attended the LEAP programme in primary school but stopped attending during first year?

---

Did these students mention any reasons for their decision to stop attending to you or other teachers?

---

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---

What do you think are the most important factors influencing students' participation or disengagement in the LEAP programme or CTYI summer programmes?

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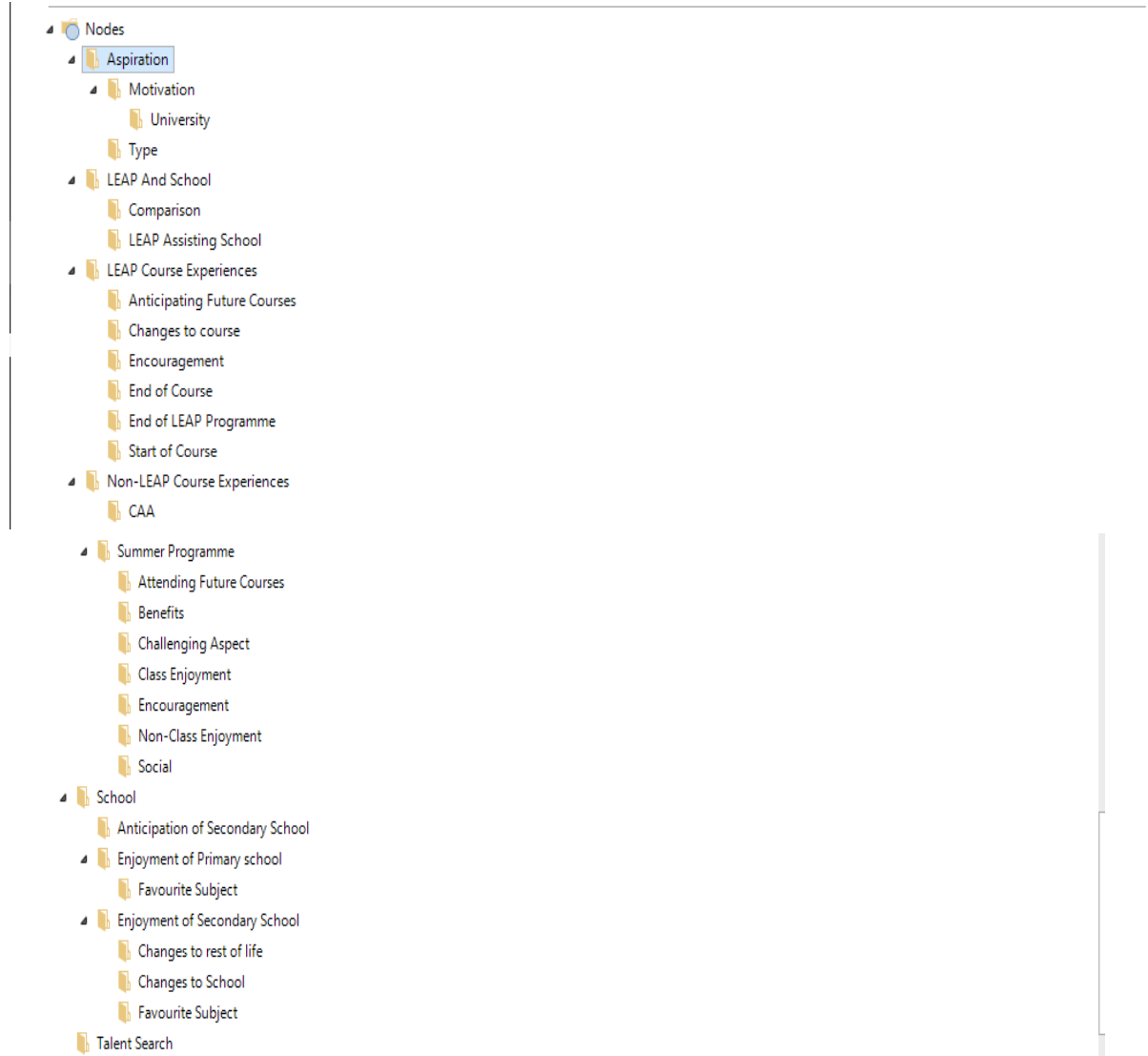
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# Appendix D- NVivo Database

## Open Coding NVivo Database

Data were originally grouped contextually and coded within this contextual grouping. For example, all responses looking back on the LEAP programme during the final term were grouped together within the End of LEAP Programme folder, and then coded according to what exactly they said about it. Below is the full collection of these contextual folders, as well as an example of the coding within the End of LEAP Programme folder.



End of LEAP Programme			
Name	Files	References	
Didn't Like Everything	1	1	
Different to School	4	7	
Dislike Social	1	1	
Disliked Logistics	1	1	
Future	1	1	
General Positive	3	12	
Gratitude	2	3	
Helped School	2	9	
Liked Course Content	5	27	
Liked Course Variety	5	7	
Liked Long-Term Commitment	2	2	
Liked Social	2	2	
Liked Teachers	1	2	
Positive University Environment	1	1	
Something to do	1	1	

As similar codes were applied across various contexts, I began to note parallels and patterns emerging within the data. For example, the responses within the Liked Course Variety code in the End of LEAP Programme folder revolved around the underlying issue of subject choice on the programme, something which was remarked upon in other areas by students. These responses were therefore grouped together under the Course Variety code. I interpreted this as relating to students' experience of the structure of the programme, and therefore placed it into the Programme Design theme. As the variety of courses students took was inextricably linked to the multi-term nature of the programme, and indeed appeared to impact their desire to remain engaged with the programme across terms, I placed it within the Long Term Engagement analytic code.

The full breakdown of each theme is shown below. The References column refers to the number of times the code appears in the data, while the Files column refers to the number of data collection instances in which it appears.

# Impact of Programme theme on NVivo Database

**Nodes**

Name	Files	References	
Impacts of Programme		0	0
Academic		0	0
Impact School		16	123
Changed experien		3	3
School Looks		1	1
Learned Meta		5	6
Learned Useful Kn		13	110
Head Start		7	22
No Impact (Schoo		6	15
Learned Interest		11	81
Novelty		7	15
New Interests		1	1
Personal		0	0
Confidence		8	16
Future		0	0
Career		7	13
Future		8	14
Social		0	0
Negative Social		5	5
Positive Social		22	94
Group Work		4	6
Improved Social S		4	5
Made New Friend		19	60
Positive Diversity		5	5
Positive Like-Abilit		2	4

## Love of Learning theme on NVivo Database

Name	Files	References	
Love of Learning		0	0
LEAP Programme		1	1
Anticipation of Future Courses		0	0
Course Variety		12	38
Enjoyment of Courses so far		12	78
General Positive		9	19
Love of Learning		14	80
Likes		0	0
Course Content		22	343
General Positive		15	102
Liked Course Variety		5	7
Novelty		9	19
Start of Course		0	0
General Positive		6	38
Love of Learning		6	52
Novelty		2	8
Positive Content		3	29
Non-LEAP CTYI		0	0
CAA Programme		0	0
OS Programme		0	0
School		0	0
Anticipation of Secondary School		0	0
Negative Academic		5	19
Negative Homework		5	44
Negative Pressure		5	52
Positive Academic		5	94
Comparison School LEAP		1	1
LEAP Helps School		2	2
Less Hours		1	2
More Enjoyable		3	12
No Homework Etc.		1	2
No Uniform		1	2
Prefer Social		1	1
Prefer Style of Learning		4	15
Prefer Subject Matter		3	5



Name	Files	References
Prefer Teacher		2
Same as School		4
School More Difficult		2
Primary School		0
Negative Academic		27
Negative homework		30
Negative Pressure		5
Positive Academic		73
Favourite Subject		0
Like Material		97
Mastery		51
Secondary School		0
Negative Academic		43
Negative Homework		45
Negative Pressure		22

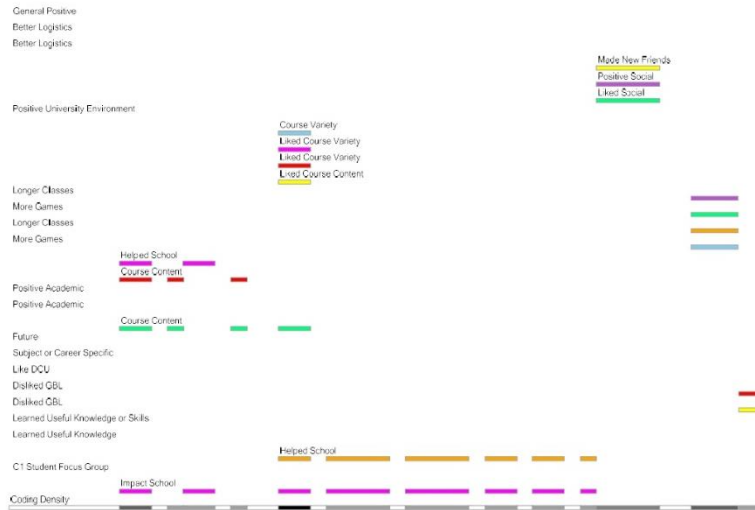
Positive Academic		77
Favourite Subject		0
Career		1
Interesting Material		47
Like Teacher		8
Mastery		9
University		0
Career or Income		87
Education For Itself		71
Enjoyment or Personal Development		23

# Programme Design theme on NVivo Database

Programme Design	1	1
Action Research	0	0
Changes to Courses	0	0
Better Content	8	18
Better Logistics	4	5
Change Time	2	6
Disliked GBL	1	1
Longer Breaks	3	4
Longer Classes	10	16
More Classes	5	11
More Computer Classes	1	1
More Discipline	1	2
More Games	3	6
No Homework	1	2
None or Don't Know	13	159
Shorter Classes	4	4
Trips	2	2
Identification	0	0
Long-Term Engagement	0	0
Course Variety	15	45
Dis-engagement	0	0
Boring or Confusing	7	15
Cannot Attend	3	8
Forced to Attend	3	3
Negative Time Given Up	6	18
Opportunity	6	23
Repeating School Material	3	4
Sacrifice	1	1
Something To Do	4	4
Wrong Subject	4	10
Enjoyment of Courses so far	12	78
Long Term Engagement	5	11
Mixed	3	8
Opportunity	6	23
Positive Instructor	10	24
Transition	0	0
University Environment	0	0
LEAP Environment	1	1
Positive DCU	5	5
Positive University Environment	10	18

# Appendix E- Coding Samples

Student Group Interview, March 2017



E: So this is Eamonn and this is the student focus group for the 2016/17 LEAP Programme.

1. S1
2. S2
3. S3
4. S4

E: So we'll keep going across in that order just to make it easier for me when I'm typing it up if that's ok. So, S1, Million dollar question. Are you enjoying the course? And if so, why?

1. Yeah, I'm really enjoying the course. I like it because it's a very interesting topic. And also was learning it in school so it's sort of together kind of.

E: Okay, okay, S2?

2. Yeah, it's good because it's kind of handy to know how journalists are writing stuff.

3. Yeah, I'm enjoying it because we started doing it in school and nobody understood what we were doing. I was able to get all the work done.

E: And S4?

4. Yeah, it's good learning interesting stuff about newspapers and stuff.

E: Okay, okay. And are you enjoying the LEAP Programme, have you enjoyed the LEAP programme altogether?

1. Yeah, I've really enjoyed it. All the topics are really interesting. I liked both of them really well and they helped a lot in my school studies.

E: S2?

2. I liked all of them because the English course we done helped in school.

3. I liked them all because we did maths and English and they were the two subjects I was really struggling with.

4. Yeah, the same.

E: So what do you think you've gotten out of it S1, if anything?

1. I've got a lot of for the English course, I did a lot of new vocabulary. And also one of my struggles was writing English and I think that helped a lot. And also for the business we're doing the newspaper stuff that helped me a lot to understand how the world is working and how everything in journalism is working as well.

E: S2?

2. It helped me a lot writing essays in school and learning new words and how to use proper grammar.

E: Fantastic, S3?

3. It really helped like English and maths are my worst subjects and I got an A in both in my Christmas exams so really just got my scores up.

E: And S4?

4. I got an A & a B so it seems to have helped.

E: Ok and anything else, have you made new friends?

All: Yeah.

E: And have you enjoyed it socially?

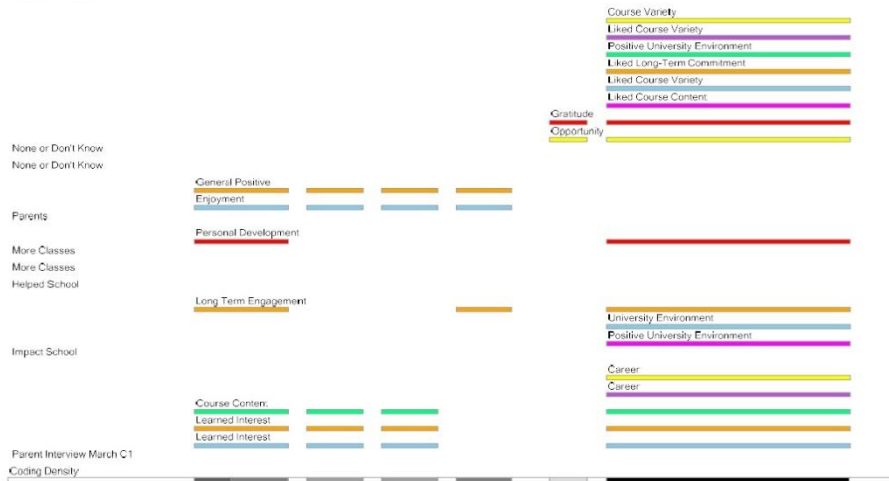
All: Yeah.

E: That's good. Is there anything about the course you would change? Any recommendations?

1. Well for the business one I wish we did more activities. We did writing and stuff but I wish there was more group activities or fun games or something like that. But the English one was great, we had a lot of fun there. And I wish it was a bit longer.

2. Would the computer gaming one count as one of the courses?

## Parent Group Interview, March 2017



E: Hello, so this is the focus group on the 11th of March for the 2016/17 LEAP Programme. My name is Eamonn and I'm co-ordinating the programme. We might just go around now and introduce ourselves. Sorry, your name and your child's name.

1: I'm P1 and my child is SP1.

2: I'm P2 and my child is SP2.

3: I'm P3 and SP3 is my daughter.

4: I'm P4 and my daughter is SP4.

E: OK so we'll start off hopefully with a nice easy question. So we'll go around in this order because it'll make it easier for me to keep track of. So, yeah, P1, did SP1 enjoy the LEAP Programme?

1: Oh yeah, absolutely. I mean he's coming here after school every Wednesday and Friday for years and he really enjoyed the programme. I think it was the first time the journalism was on the and he found it very interesting, fascinating the way the whole paper industry works and words and the way you put them in. He always looked forward to coming here, he always saw this as his own private little thing, you know.

E: Thanks. P2, how did SP2 find it?

2: Yeah, the same thing, she found it very interesting, she enjoyed it. It was the interviewing that she was particularly interested in. How they were interviewed and that. But yeah, she enjoyed it.

E: Perfect. P3?

3: SP3 enjoyed coming, she enjoyed the layout of the paper, more than the words part because she's just not a word person. She loved the layout and figuring out what way to lay it out to get the most out of the paper.

E: And P4?

4: Yeah, SP4's been having a great time here since a couple of years back when she started doing the video gaming programme and all the different courses she's been doing, she's really been coming on in leaps and bounds for it.

E: Excellent. So back to you P1, in general, over the whole year of the LEAP, do you think SP1 has gotten much out of it?

1: First of all, I'd like to say thank you very much, an unbelievable programme. I think it's new is it?

E: This is the first year, so you're kind of the guinea pigs.

1: It's quite expensive if you do it privately, it's quite a strain. It's one, a weight off my mind and it's nice to know that somebody has your back and you can involve yourself in keeping this going. He really looked forward to going two or three or four times a year, especially in the summer. And every time you come there's new courses on the agenda so it's never repeating itself all the time. It's great for them to have a choice of what they truly like rather than be forced on them. And as I said, he loves coming here, he loves the little secret place. I mean it's very unusual. I think DCU is the only college in the country that does it. They give every college in the country an opportunity to participate in what is a third level education so one they get used to life in university, they get used to lecturing. They're not treated differently to anybody else. When they come to 18 to do their leaving, the progression will be fantastic and the crossover will be seamless for them. DCU will have them on record, they'll be known and it'll be very easy for them to go into third level education and about time. So full marks and thanks very much.

E: And P2?

# Appendix F- Code Sample

## *Love of Learning, "Anticipation of Future Courses"*

[<Files\Cycle 1\LEAP Cycle 1 \(2\)>](#) - § 7 references coded [4.17% Coverage]

Reference 1 - 0.60% Coverage

I can't wait to learn more stuff

Reference 2 - 0.60% Coverage

I would learn even more

Reference 3 - 0.60% Coverage

Because I will make more friends and learn new things

Reference 4 - 0.60% Coverage

I don't know, I just like learning

Reference 5 - 0.60% Coverage

Because I am looking forward to learn more

Reference 6 - 0.60% Coverage

Because you will learn alot and be with your friends

Reference 7 - 0.60% Coverage

I would like to learn more

[<Files\Cycle 1\LEAP Cycle 1 \(4\)>](#) - § 3 references coded [1.28% Coverage]

Reference 1 - 0.43% Coverage

Because I am excited to learn about interesting things

Reference 2 - 0.43% Coverage

I'm looking forward to learning more, but I'm not sure if I will come since my cousin might get married, but I really want to come.

Reference 3 - 0.43% Coverage

I am looking forward to the summer programme because it gives me something to do and I gain valuable knowledge

[<Files\Cycle 1\LEAP Cycle 1 \(5\)>](#) - § 2 references coded [1.52% Coverage]

Reference 1 - 0.76% Coverage

I will learn more

Reference 2 - 0.76% Coverage

Because I'm going to learn about new things on unique courses with my friends

[<Files\Cycle 2\LEAP Cycle 2 \(2\)>](#) - § 17 references coded [5.52% Coverage]

Reference 1 - 0.32% Coverage

I'm looking forward to it because they are always interesting and fun

Reference 2 - 0.32% Coverage

Because its fun and interesting

Reference 3 - 0.32% Coverage

Because you learn lots of new things

Reference 4 - 0.32% Coverage

I love learning new things and making new friends

Reference 5 - 0.32% Coverage

Because its interesting and fun

Reference 6 - 0.32% Coverage

As I will learn a lot of things I do no know about

Reference 7 - 0.32% Coverage

Because I will learn more new things

Reference 8 - 0.32% Coverage

I'm looking forward to it because it seems intresting

Reference 9 - 0.32% Coverage

I'm looking forward to different subjects. I want to continue because it's really fun and I love learning!

Reference 10 - 0.32% Coverage

To learn more about films

Reference 11 - 0.32% Coverage

Because the course has alot of new things and it is very enjoyable

Reference 12 - 0.32% Coverage

Because this course was fun and I learned so much and would want to do another corse

Reference 13 - 0.32% Coverage

Yes because I learned so much here the rest will hold more than I could imagine

Reference 14 - 0.32% Coverage

Yes because it will be a good experience and I will learn more fun things

Reference 15 - 0.32% Coverage

I look forward to learning more

Reference 16 - 0.32% Coverage

I am because I want to know more

Reference 17 - 0.32% Coverage

It makes me feel smarter! And I learned a lot, it was so much fun!

[<Files\Cycle 2\LEAP Cycle 2 \(4\)>](#) - § 6 references coded [2.86% Coverage]

Reference 1 - 0.48% Coverage

Because my knowledge has grown on science and maybe if I go again I will know more

Reference 2 - 0.48% Coverage

Because it's fun and I've learned a lot.

Reference 3 - 0.48% Coverage

Its fun getting to learn and making new friends

Reference 4 - 0.48% Coverage

I'll learn even more stuff

Reference 5 - 0.48% Coverage

To learn new things

Reference 6 - 0.48% Coverage

More Challenges!

[<Files\Cycle 2\LEAP Cycle 2 \(6\)>](#) - § 16 references coded [3.81% Coverage]

Reference 1 - 0.24% Coverage

I found it interesting to learn new things and it is a great opportunity to meet other people

Reference 2 - 0.24% Coverage

Because I'm ready to learn new things

Reference 3 - 0.24% Coverage

Its intresting + fun

Reference 4 - 0.24% Coverage

I want to learn more and be advance in certain things so throughout my life I will be able to do things

Reference 5 - 0.24% Coverage

I am looking forward to all the new courses and learning new things

Reference 6 - 0.24% Coverage

Beacause I want to learn more things to help me get further in life

Reference 7 - 0.24% Coverage

Because, we get to learn a lot of interesting thing that the school doesn't teach and know

Reference 8 - 0.24% Coverage

This is a good way to learn

Reference 9 - 0.24% Coverage

I find them interesting, a fun thing to do on a weekend and a great experiance

Reference 10 - 0.24% Coverage

I like learning new information and boosting my knowledge

Reference 11 - 0.24% Coverage

I will learn alot of things

Reference 12 - 0.24% Coverage

Because I enjoy learning new things

Reference 13 - 0.24% Coverage

I believe it is interesting

Reference 14 - 0.24% Coverage

I had a great time and I learn alot every Saturday

Reference 15 - 0.24% Coverage

I like taking part in it because it is very interesting

Reference 16 - 0.24% Coverage

Because the courses are interesting and I never fail to have a good time and I always meet new people

[<Files\\Cycle 2\\LEAP Cycle 2 \(7\)>](#) - \$ 4 references coded [0.92% Coverage]

Reference 1 - 0.23% Coverage

Sometimes during the summer I forget things and get bored, these classes help my brain learn more

Reference 2 - 0.23% Coverage



because I want to learn more

Reference 3 - 0.23% Coverage

I enjoy learning

Reference 4 - 0.23% Coverage

I love all the Leap programmes THIS IS MY Third One!

[<Files\Cycle 2\LEAP Cycle 2 \(8\)>](#) - § 5 references coded [1.82% Coverage]

Reference 1 - 0.36% Coverage

I'm looking forward to learning new things

Reference 2 - 0.36% Coverage

To seeing my new & old friends to learn more & to have something to do

Reference 3 - 0.36% Coverage

Because I enjoy learning new stuff

Reference 4 - 0.36% Coverage

I really love learning about things I didn't know before and these courses really help that

Reference 5 - 0.36% Coverage

I love coming to these courses because I always learn something new and meet new people

[<Files\Cycle 3\LEAP Cycle 3 \(2\)>](#) - § 11 references coded [5.82% Coverage]

Reference 1 - 0.53% Coverage

Because I want to learn more

Reference 2 - 0.53% Coverage

I am really looking forward to the rest of the leap programme as I really enjoy learning skills that I don't normally learn at school

Reference 3 - 0.53% Coverage

to learn more things

Reference 4 - 0.53% Coverage

It was fun learning new stuff

Reference 5 - 0.53% Coverage

because I love directing and writing

Reference 6 - 0.53% Coverage

I would love to do more Leap courses because they're really fun and i learn a lot from them

Reference 7 - 0.53% Coverage

It is interesting

Reference 8 - 0.53% Coverage

because I would be able to have more skills

Reference 9 - 0.53% Coverage

Im looking forward to it because it will be interesting

Reference 10 - 0.53% Coverage

Because I can't wait to learn more

Reference 11 - 0.53% Coverage

I like to come and learn new things

[<Files\Cycle 3\LEAP Cycle 3 \(4\)>](#) - § 1 reference coded [2.50% Coverage]

Reference 1 - 2.50% Coverage

Because I'm looking forward to learning new things

[<Files\Cycle 3\LEAP Cycle 3 \(6\)>](#) - § 4 references coded [3.85% Coverage]

Reference 1 - 0.96% Coverage

I want to learn new and interesting things

Reference 2 - 0.96% Coverage

I enjoy learning

Reference 3 - 0.96% Coverage

so I can learn new things

Reference 4 - 0.96% Coverage

It is very interesting

[<Files\Cycle 3\LEAP Cycle 3 \(7\)>](#) - § 2 references coded [1.10% Coverage]

Reference 1 - 0.55% Coverage

I would like to learn more, but I'm not used to socializing as much as I would if I were to go

Reference 2 - 0.55% Coverage

I'm going to learn lots of new stuff

[<Files\Cycle 3\LEAP Cycle 3 \(8\)>](#) - § 1 reference coded [0.83% Coverage]

Reference 1 - 0.83% Coverage

I want to have a chance to learn more

# Appendix G- Sample Questionnaire Responses

Student Questionnaire, 2017 Spring End Cycle 1

Are you enjoying the LEAP Programme?

Yes, I love it!       Yes, a little       Not really       Not at all!

Why/Why not?  
because it is very educational. I am  
learning a lot of new things.

What, if anything, have you gotten out of it so far?  
how to multiple fractions. how to  
find similarities in words. new words  
Journalism.

Are you looking forward to this class?

Very much       Sort of       Not that much

Why/Why not?  
because it seems like a very  
fun class + in school I'm learning  
about newspapers + Journalism, so it will help  
in school.

Are you planning on attending the summer programme?

Yes

No

Are you looking forward to the summer programme?

Very much

Sort of

Not that much

Why/Why not?

because I saw My option courses  
and they seemed very interesting

Have you been encouraged by anyone to continue coming to the programme? (Parents, family, teachers, friends, others) How?

they drop me of here. They help  
me if unsure about anything

Have you told your school that you are on this programme?

Yes

No

Why/Why not?

because it is good to tell my  
school that I'm doing extra  
curriculars out of school.

How did you find the Talent Search assessment?

Good. A bit tight in time

Did you feel prepared for it?

Yes, definitely

Which three words best describe how you feel about school?

excite<sup>ing</sup> fun educational

What's the best bit about secondary school?

More Subjects + it's quicker, so  
I'm not bored in class.

What's the worst bit about secondary school?

Some girls are disrupted in class,  
so it is slower.

Are you finding secondary school difficult?

NO

Has the LEAP programme made any difference to your experience in school?

Yes

No

In what ways? / Why not?

it has prepared me in English.  
(word war III) It has helped prepare  
me for what changes there would  
be

Primary School Teacher, 2018 July Cycle 3

How many students have you nominated for the LEAP programme?

2

Why did you choose these students?

Highest STEN Scores in class and both excited by idea of class.

How many of these students have attended previous CAA courses?

Both.

What, if anything, do you think students get out of taking part in LEAP/ CAA courses?

They love doing them and they come back into class with a spring in their step afterwards.

Do you think students will benefit more from taking multiple classes over the duration of the LEAP programme?

Yes

Somewhat

No

Why/Why not?

They were even more excited going into the Leap than the previous class. It seems like every class they do builds their passion more.



What do you think is the biggest factor in students' choice of whether to continue taking part in classes across multiple terms?

How much they enjoyed the last class and how much they want to do the subject in the next one.

Did you have any students who attended the first term of the LEAP programme but do not want to attend any further classes?

Yes

No

Don't know

Did these students mention any reasons for their decision to stop attending to you or other teachers?

Do you think the LEAP programme helps students with the transition to secondary school?

Yes

Somewhat

No

Why/ Why not?

It's like a mini version of the move - learning new things and meeting new people and new teachers.

# Appendix H- Sample Application Forms

## Teacher Information Letter July 2016

### RE: Centre for Academic Achievement LEAP Transition Programme

7th June 2016,



Dear Principal / Access Liaison,

I am delighted to inform you that the Centre for Talented Youth Ireland (CTYI) in conjunction with the DCU ACCESS dept. is running a free programme for high ability students from your area transitioning from primary to secondary school, starting with a week-long course on the **4th July** and continuing with two separate one-day events in the autumn and a two- or three-week programme next summer. I have enclosed an information sheet giving more details about what the programme involves. Places are limited to **two** per school. If a school feels they need an extra place they should contact me on phone no. 01 7005634 **after 17<sup>th</sup> June** and we will facilitate this where possible.

Important points to note:

- Parents/guardians of students will be notified by post regarding which course their child has been allocated and also where to go on the first day of the programme.
- Teachers are asked to provide the parents/guardians of nominated students with enclosed programme details. Health & Permission forms from the parents/guardians must be returned with the teacher nomination form.

We would ask that you assist the success of this project by:

- Nominating **two students from 6th class**
- Asking the child's parent/guardian to complete the parent form
- **Returning parent form to CTYI by post: LEAP Programme, CTYI, DCU, Dublin 9, or by scanning & emailing them to: Eamonn.Carroll@ctyi.org**

A few days before the courses start the parents/guardians will receive in the post confirmation of which building in DCU to bring their child to for the course.

Thank you for your continued support and co-operation.

Yours faithfully,

Eamonn Carroll,  
CTYI

## *Student Selection Guidelines*

To ensure we are targeting the correct students for this programme, please follow the below guidelines when selecting your students.

Please note:

- The pupils must be nominated by their class teacher.
- They must be able to attend on the specified dates.

## **Selection Process**

### **Step 1)**

- The pupils must currently be in **6th class**

### **Step 2)**

- Pupil **must** be from Access target group
  - o Living in a area of concentrated disadvantage
  - o Little or no tradition of educational attainment in family
  - o Socio-economically underrepresented at third level
  - o Low family income

### **Step 3)**

- Within the cohort detailed in Step 2, choose the two students who scored highest in their class tests or demonstrate exceptional ability in problem solving or quizzes.

## Parent Information Sheet July 2016



### LEAP Programme Parent Information

The move into secondary school can be scary and challenging, but it can also be exciting and full of opportunities to learn new things in new ways. The Lifelong Educational Achievement Partnership (LEAP) Transitions Programme is about introducing students to some new and interesting ways of thinking. We here at The Centre for Talented Youth, Ireland are passionate about the joy of learning and the importance of nurturing potential. Rather than letting children's talents and interest go to waste, we want to give them the opportunity to push themselves and discover the incredible things they are capable of. Your child has been nominated for our programme because they are performing very well at school and have the ability to continue to do so into secondary school and eventually third-level.

Above all, the LEAP Transitions Programme will give students the skills and mindset to hit the ground running and thrive in their new world, as well as making them part of the CTYI community for the rest of their secondary school days and beyond.

The first part of the programme will be a week long course (July 4th-8th, 10am-1pm) in DCU and students will be given the choice between two classes:

**Word War III:** We are constantly bombarded by words in many shapes and guises, from bestselling books to rousing speeches to attention-grabbing ads. In this class we will explore ways to read these words and the secrets to writing them. The written word changes the world every day and if you want to learn how to turn your own thoughts into powerful words, this is the course for you!

**Maths Magic:** What do biology and music have in common with robotics and computer science? Maths! The modern world runs on maths and this course will delve into some of the coolest, strangest and most interesting maths hidden inside everyday life. Thinking mathematically is a great way to see beyond the surface of things and into how they really work, so do this course to feed your curiosity and unravel the universe's mysteries.

The second part of the programme will take place in the autumn and will include a one day workshop on preparing for the CTYI Talent Search and the opportunity to take part in the Talent Search itself. Qualifying with us through this assessment will give students the opportunity to attend our summer programme where they can pursue subjects like Criminology, App Design & Development, Popular Fiction, Biotechnology and many more with dedicated instructors and committed classmates. More information about this will be posted to parents closer to the time.

The third part of the programme will give students a place on the CTYI older student summer programme at the end of their first year in secondary school. Depending on their assessment scores, students will be eligible to attend for two or three weeks and choose from a wide range of courses according to their interests. After completion of this programme, students will be eligible to attend courses for the rest of their time in secondary school.

# Parent Application Form July 2016

## **Nomination Form Centre of Academic Achievement 2016 LEAP Programme**

**Dublin City University: 4<sup>th</sup>-8<sup>th</sup> July, 10:00am-1:00pm each day**

Name of child: \_\_\_\_\_ Date of Birth: \_\_/\_\_/\_\_  
Parent/guardian mobile phone number (in case of emergency): \_\_\_\_\_  
Home Address: \_\_\_\_\_  
Parent/guardian email address: \_\_\_\_\_  
School Name: \_\_\_\_\_

**Please circle the course your child would like to study- marking in order of preference (1=high)**

<b>A – Word War III</b>	<b>preference 1 2</b>
<b>B – Maths Magic</b>	<b>preference 1 2</b>

**Health & Permission Form:** Parent/guardian MUST read and fill out all the sections below and sign and date.

Rules: In order to ensure that everyone enjoys the workshop we ask participants to follow these basic ground rules.

- No Participant is allowed to leave the campus without being accompanied by a parent, guardian, or teacher unless a parent/guardian has given written permission to a staff member.
- Participants must follow all instructions given by a member of staff & treat others with respect.
- If a child does not follow instructions/behaves badly they will not be allowed to continue.
- 

**Circle as appropriate:**

1. This child has an illness requiring treatment/medication: Yes  No

If yes, what is the illness and the treatment required:  
\_\_\_\_\_

2. This child carries medication for his/her use: Yes  No

If yes, what is the medication required:  
\_\_\_\_\_

3. Name and phone number of family doctor: \_\_\_\_\_  
Tel: \_\_\_\_\_

4. In the event that this student becomes ill, please contact:

Name: \_\_\_\_\_ Phone: (Day) \_\_\_\_\_

N.B. If your child requires the use of inhalers etc please ensure they have these with on the course.

**Parent/Guardian Permission to attend this course:**

I/We the parent(s)/guardian(s) of (name of child) \_\_\_\_\_ agree that my daughter/son will take part in the LEAP programme. I/We have read and agree with the ground rules of the course and have completed the health section. I the parent/guardian give consent for any photographs/video footage taken of my child during the LEAP programme to be used in printed/online newspapers/other media outlets and published in other promotional material to promote the centre.

Parent/Guardian Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Please return this form to the child's teacher by **Friday June 17th** at the latest. **Teachers post these forms to LEAP Programme, CTYI, DCU, Dublin 9 or scan & email to:**

**Eamonn.Carroll@ctyi.org.** If you have any queries or don't want to give media permission for your child phone Eamonn on tel: 01 7008977. A map of DCU campus & directions will be posted out to parents a few days before the course starts.